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JULY 1966 — 50¢

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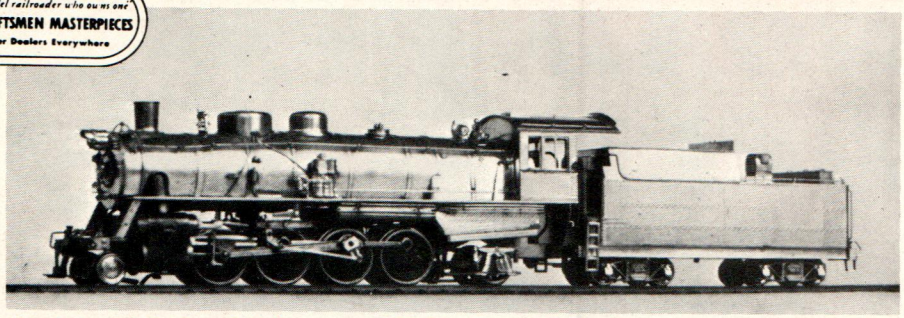

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Built by Baldwin in 1923, Class 0-1A were numbered 4940-4999. These Locomotives were fitted with lightweight reciprocating and revolving parts, laird crossheads, and a tapered boiler. Beautifully detailed even to the high coal boards of the tender.

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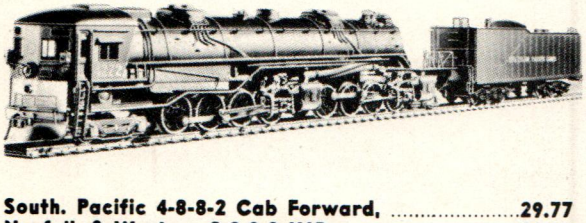

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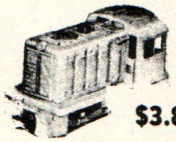

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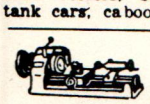

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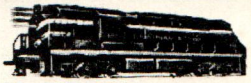

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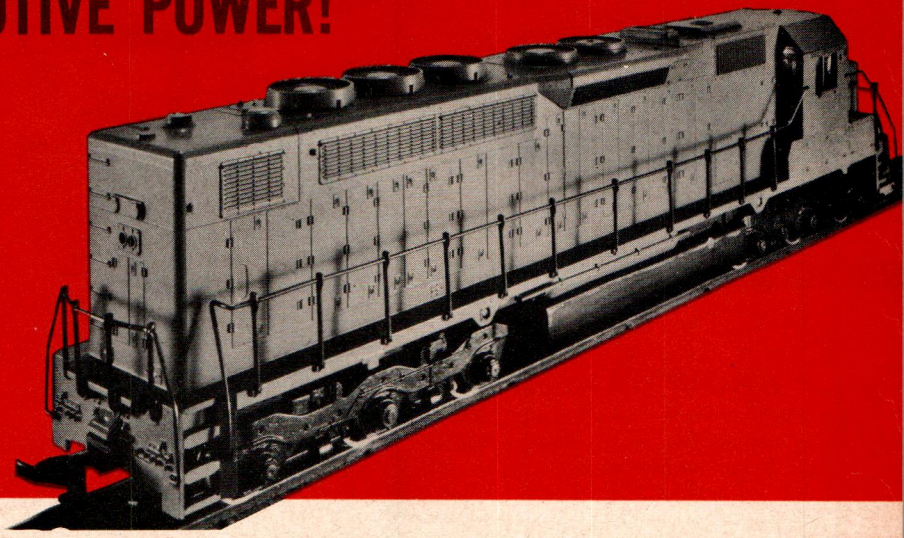
LET'S TALK ABOUT MOTIVE POWER!

Here is Athearn's NEW HO scale SDP-40 Passenger Diesel



ATHEARN announces the introduction of the all-new Electro-Motive SDP-40 passenger diesel locomotive in HO scale. The prototype is a 3000 h.p., 90 mile-an-hour unit that will be replacing the older passenger engines on many major railroads. The ATHEARN SDP-40 features the POWER-FUL motor with NEW floating power installation, twelve wheel, geared drive and exceptional, authentic detailing. Available in B&O, C&NW, New Haven, NYC, Santa Fe and Southern Pacific color schemes. Price, ready-to-run, $14.95.

NOW—There are six EMD SD-45 freight locos ready

See these new ATHEARN HO scale model freight locomotives at your favorite hobby store TODAY. Smooth, powerful, quiet — you'll have to see 'em to believe it!

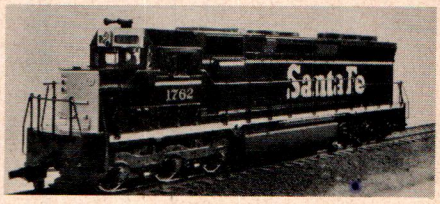
SD-45, Seaboard, r-t-r ----------$14.95

SD-45, Union Pacific, r-t-r ----------$14.95

SD-45, Pennsylvania, r-t-r ----------$14.95

SD-45, Burlington (CB&Q), r-t-r --------$14.95

SD-45, Southern Pacific, r-t-r ----------$14.95



SD-45, Santa Fe, r-t-r ----------$14.95

COMING SOON! EMD DD-40

This new giant is a 6000 h.p. unit with 16 wheel drive. And the ATHEARN HO scale model **will have 16 wheel drive,** too!
Single motor --------$19.95
Twin motored ------$24.95

The GP-35

The Electro-Motive GP-35 is one of the most popular freight locomotives in operation today. ATHEARN is now bringing the unit to you in HO scale. All eight wheels powered, new POWER-FUL motor, with new Floating Power installation, usual superb detailing.

Price, r-t-r ----------$12.95

The EMD SW-1500

The latest in the Electro-Motive line of heavy switchers, this ATHEARN creation will delight you. Eight wheel drive, POWER-FUL motor with Floating Power installation, priced at only $10.98, r-t-r.

ATHEARN

11929 S. Western Ave. Los Angeles, Calif. 90047

NOTES ON AN OLD TIMETABLE

SHOWMANSHIP

In our travels we've seen many model railroad layouts. They came in every conceivable gauge, size, and quality of workmanship. Most of the layouts would benefit greatly from some lessons in showmanship. In many instances, showmanship could convert a layout into a real model railroad.

Showmanship, briefly, is the art of making a model railroad come alive. Showmanship can be practiced in a hundred different ways. Whit Towers' Alturas & Lone Pine is a great model layout, featuring wooden ties and fine scenery. Yet it is when Whit applies the showmanship of real operation that the HO layout is transformed into a real, honest-to-goodness railroad.

John Allen is another showman. John is adept at using every gimic at his command to transform his layout into a real system. John pioneered by running his scenery down to the floor, creating mountains 40 inches higher than would otherwise be possible. John has used mirrors to double the depth of his railroad. John uses every possible trick to increase the apparent size of his railroad to make it look like the real thing.

The late John Gieringer, creator of Roadside America, was another great showman. Roadside America is chock full of operating accessories that make the entire exhibit come alive. Here is real water, sound, animals that move, push-button trolleys, and more, climaxed by an impressive night-time display. Yet the trains at Roadside America are pure O gauge tinplate and many of the structures are oversized for the trains.

Since every model layout is different, we don't know what formula or type of showmanship would be most successful on your pike to help transform it into a real model railroad. Its that undefinable something extra that many of the great modelers have built into their layouts. Showmanship can work on your railroad, too.

Hal

JULY 1966 VOL. 35, No. 2

RAILROAD MODEL CRAFTSMAN

A CARSTENS PUBLICATION

Including TOY TRAINS combined with ELECTRIC TRAINS and HOBBY RAILROADING, MINIATURE RAILROADING, MODEL & RAILWAY NEWS, THE O GAGER, and THE MODELMAKER (Est. 1924) Magazines.

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SAFETY VALVE

More Steam Engines To See

Concerning your May issue, concerning steam locomotives to be in operation this summer, please add these:

Cadillac & Lake City Ry. Co.
Lake City, Michigan
Livonia, Avon & Lakeville RR
Livonia, N. Y.
Morris County Central RR
Whippany, N. J.
Pioneer Tunnel
Ashland, Pa.
Arcade & Attica RR
Arcade, N. Y.
Everett Railroad
Everett, N. Y.

Hugh F. Stephens
178 Roseland Ave.
Caldwell, N. J.

Our local railroad museum has 14 steam lokies, mostly logging, plus streetcars, interurbans and some freight and passenger equipment. We have three Brill Master-units (ex-YVT, ex-PEPCO), two interurbans (ex-BCER 1207, ex-PEPCO 1058) on wheels and one ex-PNT 1010 Niles body. The locos include a 3-truck SHays, a 2-truck Heisler, 0-4-OT, 2-6-OT with tender, 2-6-2T, 4-6-0, 2-8-0, 2-8-2T, 2-4-4-2, two 2-6-6-2T types, 2-8-2, and 2-6-6-2. We do not yet have scheduled operation, but we will be operating steam during the summer. We hope to also have electric car operation. The museum is not officially open to the public but we do welcome people who can put up with the mess of a museum under construction. By summer we should have about a mile of track in operation.

Raoul Martin
P. O. Box 423
Seattle, Washington 98111

As do most railway operating museums, the Puget Sound Railway Historical Asociation welcomes new members. The group is presently raising money to acquire ex-Oregon Short Line No. 529, a delightfully chunky Baldwin 2-8-0. Donations are tax deductable. Raoul Martin, if you don't already know, is the brass hat of Northwest Short Line and an active member of PSRHA. Ed.

Wants Marker Lights

Where would I be able to obtain a real set of marker lights such as those used on freight trains or atop switch stands?

Edwin Duracka
5796 Archer Ave.
Chicago, Illinois 60638

Perhaps some readers might have some they'd like to sell or trade. Antique shops are also logical sources, though they are more likely to have brakemen's lanterns. Railroads occasionally also offer them for sale. We're not overly proud of railfans who acquire such pieces on their own initiative. They're not helping the railroads, nor are they making it easier for the legitimate model railroad fans who want to visit railroad property for data gathering, or just for a look. Ed.

There is a Trestle in a Tunnel

In the April 1966 RMC you had a cartoon by Jack Work, saying if you looked hard enough you could find a trestle in a tunnel. Well, I didn't look very hard but I found not one but two trestles in a tunnel.

In the Boylston St. Subway of the Mass. Bay Transportation Authority is located the Kenmore Square Sta-

BOWSER REFERENCE MANUAL

Indispensable for owners of Bowser and former Penn Line steam engines and for all scratch builders and repair men, including **15 pages of exploded views** of 8 steam locos and 6 tenders currently in production as well as 2 obsolete locos for which parts are available. **18 remarkable photos** of prototype engines giving right and left side details for super-detail modelers. **Actual size illustrations** of valve gear parts and main rods available for scratch building or replacement. **Price and parts lists** for sub-assemblies which allows you to select sets of parts for prices less than the individual cost of the parts. **PRICE** **$1.00**

COMPLETE KITS
UP Challenger, 4-6-6-4, less tender **$49.50**
NYC K-11 Pacific, 4-6-2, less tender **24.50**
USRA Heavy Mountain, 4-8-2, less tender **39.95**
PRR E-6 Atlantic, 4-4-2, with low side tender **29.50**
PRR K-4 Pacific, 4-6-2, with high side tender **34.50**
PRR H-9 Consolidation, 2-8-0, w/low side tender **32.50**
PRR I-1 Decapod, 2-10-0, with long haul tender **39.50**
PRR L-1 Mikado, 2-8-2, with high side tender with doghouse **34.50**
Low Side Tender **6.95**
High Side Tender **6.95**
High Side Tender with Doghouse **7.50**
Long Haul Tender **8.75**
Semi-Vanderbilt Tender **8.50**

MECHANISM KITS for scratch builders, include side rods, main rods, crossheads, valve gear, frame, cylinders, drivers, motor w/worm, trailing & lead trucks & instructions.
Atlantic, 4-4-2, with 80" divers & DC60 motor **18.50**
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Consolidation, 2-8-0, with 62" drivers and DC60 motor **20.50**
Decapod, 2-10-0, with 62" drivers & DC71B motor **24.95**
Mikado, 2-8-2, with 62" drivers and DC71B motor **22.95**
Instruction booklets—E-6, H-9, I-1, L-1, K-4, ARC-1, K-11 & USRA Mountain, ea. ..... **.50**

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5/2 Canadian National—W
12/1 Great Northern—W with B&W Heralds
12/2 Great Northern—Y with B&W Heralds
3/1 New Haven—B
3/2 New Haven—W
9/1 New York Central—B with B&W Heralds
9/2 New York Central—W with B&W Heralds
1/1 Pennsylvania—B
1/2 Pennsylvania—W
11/1 Santa Fe—W with B&W Heralds
11/2 Santa Fe—Y with B&W Heralds
2/1 Southern—B
2/2 Southern—W
7/2 Southern Pacific—W with B&W Heralds
10/2 Union Pacific—W with B&W Heralds
15/1 Assorted Railroad Heralds—3 colors, NYC, GN, C&NW, Milwaukee Road
14/1 DF Signs—Y
4/1 Dimensional Data—B
4/2 Dimensional Data—W
4/3 Dimensional Data—Y
6/1 Passenger Car Names—Gold

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No. 101—A non-gumming, long lasting oil for bearings. Will not gum the commutator but will actually increase performance. 1/4 oz. **39c**; 1/2 oz. **69c**; 3/4 oz. **89c**
No. 102—Gear Lube. Will not dry out or harden looks like oil, acts like grease. 1/4 oz. **39c**; 1/2 oz. **69c**.

PITTMAN MOTOR PARTS

	DC60	DC62	DC70	DC71B
Brushes	50c pr	50c pr	50c pr	50c pr
Armature	2.75	2.50	2.75	3.25
Brush plate & spring assy.	40c	35c	40c	75c

STEAM ERA HOPPER CARS
Varney plastic Tuscan Red outside braced twin hopper bodies & Lindberg sprung trucks with RP25 wheels. Easy-to-assemble kit requires only 2 screws to secure trucks and 2 coverplates to hold X2f couplers in place. To hold price down we do not supply weight or coal load. Both are easily made by the modeler. (Dealer Min. 6) **$1.49**

SAME AS ABOVE but with unlettered black plastic body **1.29**
CUSTOM DRAWBARS—Brass stock .020"x1/4" with .128 holes spaced as follows: 3/4", 13/16", 7/8", 15/16", 1", 1-1/16", 1-1/8", 7-3/16". May be assorted. ..... **4 for .50**

LOST WAX BRASS CASTINGS
Round number plates, No. 321-12 ..... **3 for 50c**
Keystone number plates, No. 321-11 ..... **3 for 50c**
UP Shield number plates, No. 321-11 ..... **2 for 50c**

LINDBERG TRUCKS—Bettendorf sprung with RP25 wheels, Pair ..... **.69**
MACHINE SCREWS—Slotted heads unless otherwise stated. One size per doz. Doz. ..... **.30**
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Fillister head—5/16"
Phillips—1/8" pan head & 3/8" round head
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Round head—1/4", 3/8"
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tion built in 1932 to relieve a bottleneck in traffic in the square. Four tracks were put in the station, with island platforms between the two inbound and two outbound tracks. It was planned that in case the subway be converted to conventional high floor care use, the center tracks were raised to platform level with trestlework, and the Beacon St. tracks were provided with a reverse loop over the center tracks. The Commonwealth St. ramp at Blandford St. is also built on trestlework, so that future extension of the subway beyond Kenmore Square would not require conversion of existing tunnels, as when the East Boston tunnel was converted for use with high floor cars.

Ben Yuscavitch
91 Wilson Ave.
Wollaston, Mass. 02170

An Old Timer

You're a still older timer (RMC May '66 p. 11) if you remember the beautiful scale pre-NMRA trucks of Carl Auel in O gauge with working journal lids. Or the working knuckle couplers of Monarch (Fowler). Or the ¼" scale vs. 17/64" scale battle in O gauge land, which fine scale may someday revive.

R. H. Haserodt
14 Marguerite Ave.
West Chester, Pa. 19380

One wonders what Carl Auel could have accomplished with lost wax techniques. Many of his early O scale trucks are still in operation. Monarch couplers are still available, frequently used by modelers wanting to extra-detail their better equipment. Fine scale is making slow headway but more progress seems to be coming in tightening up of existing NMRA standards through use of smaller rail sections and RP-25 flanges, thus permitting use of existing O scale equipment. 1966, by the way, looks like the biggest O gauge year in a decade, with new cars, locos, and trolleys. Ed.

Choke Cable Suppliers

Trouble Shooting question (March 1966 RMC) asks about cable lengths. Try any automotive supply house that handles the Dorman line. Their catalog No. CC27 is 30 ft. long and retails for $9.50 complete with knob. Dorman offers lengths to 50 ft. without knobs.

Otis K. Monrad
1328 Hall Ave.
West St. Paul, Minn. 55118

Wants HO Girder Rail

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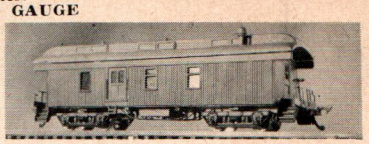
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scale girder rail suitable for streetcar or industrial street use, for those modelers wishing greater realism in city traction modeling.

I am also interested in the possibility of ready availability of pre-assembled catenary such as used on the North Shore and the girder type supports used on that line. Also would like some of the North Shore's GE freight locos or their former Oregon Electric heavy freight locos.

Denis M. Zamirowski
5515 North Sayre Ave.
Chicago, Ill. 60656

Girder rail for HO does not seem too likely in the near future. Those few traction fans who do want it either fake up their own or use the Clouser O fine scale scale girder rail, whose depth is just about right for HO. A few importers have catenary systems available but nothing is presently available that is patterned after the North Shore's system. Best bet is to make your own. Ed.

Albany & Hudson Electric Railway

I've been an active interurban fan for nearly 35 years, hence greatly enjoyed Mischke's article on Interurban Electric Railways.

One correction, though. In the paragraph pertaining to power pick-up, Mr. Mischke stated that the Hudson Valley Railway was one of the lines using all three forms: third rail, trolley pole, and pantograph. Not so. The Hudson Valley Railway was an extensive country trolley system in the Troy, Saratoga, Fort Edwards, Lake George area of New York, using 100% trolley pole power collection.

I'm sure that Mr. Mischke really meant the Albany & Hudson, a line operating between the cities of its corporate title. For the most part a third rail operation, it reverted to overhead in the cities and towns, and some pieces of its equipment were equipped with both pole and "pan". At various times it was also known as Albany Southern, and Eastern New York Utilities.

Robert C. Gerstley
153 Pleasant St.
So. Weymouth, Mass. 02190

Likes Hobbytown Of Boston

I would like to give Hobbytown of Boston a pat on the back as they are a real model railroader's friend. I recently wrote to them about a diesel I had, and the problem I was having with it.

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James A. Emley
908 Clayton Ave.
Pt. Pleasant, N. J.

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RAILROAD ACCESSORIES

- Snap-On Track Cleaner — 35¢
- HO Track Connector — 35¢
- House Lighting Kit — 50¢
- Needle Point Grease Gun — 60¢
- Mechanical Fingers — 90¢
- Needle Point Oiler — 60¢
- NMRA Couplers w/ Draft Gear (2) — 35¢
- Mounting Screws & Nuts (6 ea.) — 15¢
- NMRA Couplers w. Int. Spring — 20¢
- Sprung Freight Trucks (pr.) — 50¢
- NMRA Coupler Springs (6) — 15¢
- HO Truck Springs (12) — 15¢
- Track Cleaner — 30¢
- NMRA Uncoupling Ramp — 50¢
- Screw Driver Set — Jewelers — 50¢
- Abrasive Sheets (4 asstd.) — 25¢
- Connector Cord Set (3 ft.) — 35¢
- Terminal Lugs (solderless) — 15¢
- Wire Connector Nuts (6) — 15¢
- Match Solder (2 ft.) — 25¢
- Tiny Screw Driver Set — 35¢
- Mounting Wood Screws (14 asstd.) — 20¢
- Hook-Up Wire (6 ft.) — 25¢
- NMRA Couplers w/ Spring (2) — 25¢
- Rail Joiners — Insulated (12) — 15¢
- Machine Screws 2-56 (12 asstd.) — 20¢
- Machine Screw Nuts (12 asstd.) — 20¢
- Washers — #4 (18 asstd.) — 15¢
- HO Rail Spikes (1,000) — 35¢
- Track & Cork Spikes (250) — 20¢
- Red Grain of Wheat Bulbs (2) — 30¢
- Round Head Track Spikes (750) — 35¢
- Pea Bulb — Screw Base — 12-15 V. — 20¢
- Truck Screws (self-tap 2 x ¼") (6) — 15¢
- Neoprene Belt Drives (12 asstd.) — 15¢
- Clear Grain of Wheat Bulbs (2) — 30¢
- Green Grain of Wheat Bulbs (2) — 30¢
- White Pea Bulb — 12-15 V. — 15¢
- Rail Joiners — Brass (12) — 15¢
- Slide Switch — SPST — 30¢
- Self-Closing Forceps — 30¢

AHC HAS THE WORLD'S LARGEST STOCK OF "HO"

MODEL HOBBIES

SCRATCHBUILDER SUPPLIES

902 CAST DOOR ASST. 50¢ — 903 CHIMNEY ASST. 50¢ — 904 PLAT-FORM ACCES. 50¢ — 905 PLAT-FORM TRUCK 50¢

907 8"x10" CELLU-LOID 25¢ — 908 ASST. WOOD $2.50 — 909 STRIP-WOOD LARGE ASST. $2.50 — 910 LARGE WINDOW SET 50¢

911 MEDIUM WINDOW SET 50¢ — 912 SMALL WINDOW SET 50¢ — 913 SIGN ASST. 50¢ — 914 WOOD DOOR ASST. 50¢

916 HINGE SET 50¢ — 917 WOOD OUTHOUSE 50¢ — 918 WOOD BOLSTER 50¢ — 919 FARM ANIMALS 50¢ (1 PAIR)

920 FARM ACCES. 50¢ — 921 STATION ACCES. 50¢ — 922 ROOF SUPPORT 50¢ — 923 STATION WINDOW & PHONE BOX 50¢

924 TRACK NAILS 50¢ — 925 GRAB IRONS 50¢ — 926 3/8" MODEL PINS 50¢ — 927 WATCH-MANS SHANTY 50¢

TRACK SPIKERS — NEW HI SPEED TRACK LAYER 125 — GAUNT SPIKER 75¢

METAL TRACK GAUGES — WALTHERS.. .35; TROXEL.... .85; M.E.W. .... .35; VARNEY.... .30

SPIKES — VARNEY OFFSET HEAD LB. .50; PERFECT SQUARE OFFSET .20; UPC #1/3 SQUARE SHANK(2000) .49; UPC #126 ROUND HEAD (750) .49

RE-RAILERS — ATLAS..... .60; VARNEY..... .39; PENN LINE. .50; TYCO..... .49

TYCO #101 BLVD. STREET LAMPS 98¢

TYCO LIGHTING KIT 49¢

ATLAS STATION PLATFORMS 98¢ KIT

ATLAS RESTAURANT KIT 2.98

AHC HAS ALMOST EVERYTHING

WE STOCK OVER 40,000 DIFFERENT MODEL BUILDER SUPPLIES • FAMOUS BRANDS

MODEL RAILROAD FANS ! TRY 'AHC' FIRST FOR THE SMALL PARTS & ACCESSORIES YOU WANT ! WE CARRY A FANTASTICALLY LARGE HO PARTS INVENTORY...IN STOCK THE ENTIRE YEAR ! SEND US YOUR ORDER 99 CHANCES OUT OF 100 WE CAN SHIP WHAT YOU WANT IMMEDIATELY !

928 BAGGAGE TRUCK W/LOAD 50¢ — 929 TRACK-MANS ACCES. 50¢ — 930 SCALE CHAIN 50¢ — 931 ASST. BRAKE WHEELS 50¢

932 NMRA COUPLER PR. 50¢ — 933 WOOD DOWEL ASST. 50¢ — 934 1/32" WOOD STRIPS 50¢ — 935 1/16" WOOD STRIPS 50¢

936 ASST. WOOD SCREWS 50¢ — 937 1/4" NAILS 50¢ — 938 1/4" BRADS 50¢ — 939 3/8" NAILS 50¢

940 ASST. ELEC. PARTS 50¢ — 941 ASST. WASHERS 50¢ — 942 PLASTIC WINDOWS 50¢ — BLOCK OR CROSS SIGNAL 4/49¢

BLDG. PAPERS

WALTHERS 25¢ PER PACKAGE 6"x9" SHEETS EACH PACKAGE CONTAINS 4 SHEETS

V168 DOORS & WINDOWS, WHITE....
V160 CONCRETE BLOCKS, GRAY....
V163 FIELDSTONE....
V166W CLAPBOARD SIDING, WHITE..
V166G CLAPBOARD SIDING, GREEN..
V166Y CLAPBOARD SIDING, YELLOW..
V166R CLAPBOARD SIDING, RED....
V167 RED BRICK (2 COLOR)....
V169 FLAGSTONE & PATIO, GRAY..
V172 SLATE SHINGLE, GRAY....
V173 WOOD SHINGLES, GREEN....
V174 WOOD SHINGLES, RED....
V175 WOOD SHINGLES, BROWN....
V176 WOOD SHINGLES, GRAY....
V161 ASHLAR STONE BLOCKS, YEL.
V162 BRICK, YELLOW....
V162G BRICK, GRAY OR SMOKEY....
V164 ASHLAR STONE, RANDOM....
V483 ASPHALT SHINGLES, GRAY....
V484 ASPHALT SHINGLES, RED....
V485 ASPHALT SHINGLES, BROWN..
V486 ASPHALT SHINGLES, GRAY...
V508W BATTEN SIDING, WHITE....
V508G BATTEN SIDING, GRAY....
V508R BATTEN SIDING, RED....
V179 SAMPLER (12 SHEETS, OUR CHOICE....60

CELLULOID 4"x7" SHEETS
V506 RESIDENTIAL WINDOWS.. .25
V340 INDUSTRIAL WINDOWS.... .25
V502 UNPRINTED WINDOWS.... .25

PREFORM GRAB IRONS 144/ $1 — BRASS HAND RAILS 12/ 45¢ — VALVE GEAR RIVETS 12/ 35¢ — METAL BELLS 6/ 25¢

1743 TRU SCALE BUMPER PLAIN..... .59; ILLUMINATED .98

MHF DIAPHRAGHMS STANDARD....75; STREAMLINE..85

95¢ CLIFF LINE SINGLE TUNNEL PORTAL

JEWEL MARKER LIGHTS 60¢ EA. — HX900 2 RED 3 GREEN; HX902 2 RED 2 GREEN; HX901 1 RED 3 AMBER; HX903 2 RED 2 AMBER

CHAIN LINK FENCE — SEMAPHORE IND. 6 FT. HIGH $1.95; 12 FT. HIGH $2.95

TELEPHONE POLES — BACHMANN DOZEN.... .45; REVELL DOZEN... .49; ATLAS DOZEN.. .49

LANDSCAPING

BALLAST CEMENT PINT 59¢ — FOR CEMENTING SCENIC MATERIAL TO LANDSCAPES..

29¢ EACH — COAL, BALLAST GRAVEL, BLACK STONE, RED OR GRAY STONE..

LICHEN MOSS EACH 98¢ — H604 GREEN, H605 AUTUMN

GRASS 59¢ — JUMBO BOX REALISTIC IMITATION

MAK-A-MOUNTAIN COMPOUND $1.00

SPRAY CANS 100 EACH — EARTH, GRASS, SAND, BALLAST OR ADHESIVE.

PERMA-SCENE — COMPOUND MAKES REAL TERRAIN 8 SQ.FT. PACKAGE 100; 20 SQ.FT. PACKAGE 200

COMPLETE SCENIC TERRAIN KIT WITH SCREEN 3.49

TREES — PACKAGE OF SIX 98¢ — SHADE TREES, FRUIT TREES, PINE TREES, SPRING TREES, ASSORTED TREES, EVERGREEN TREES, AUTUMN TREES, ORANGE TREES, APPLE TREES

WEATHERING KIT — KIT CONTAINS: GRIMY BLACK, DUST, GRIME, RUST, MUD, & DIO-SOL THINNER. 1.98

PAINTS

Floquil EACH 60¢ 1 OZ. JARS — FLAT BLACK, ROOF BROWN, EARTH, CONCRETE, FLESH, GRAY, DIES, DARK-GREEN, DIES, LIGHT GREEN, PULLMAN GREEN, COACH GREEN, DIES, APPLE, REEFER ORANGE, PRIMER, BOOSE RED, BOX CAR RED, REEFER YELLOW, TUSCAN RED, REEFER WHITE, BRASS, CLEAR GLOSS, CLEAR GLAZE, DEPOT-OLIVE, VARNISH, GOLD, JADE GREEN, COPPER, TRIM GREEN, FOUNDATION, THINNER AND MANY OTHER COLORS.

BLDGS. & STRUCTURES

TYCO #104 YARD SPOTLIGHT TOWER 149 EACH — #106 2 LIGHT FLOODLIGHT TOWER

TYCO #105 BLINKING MICROWAVE TOWER 149 EACH — #107 4 LIGHT FLOODLIGHT TOWER

OPERATING ELECTRIC SIGNS — SEMAPHORE INDUSTRIES

SW1610 VALLEY LUMBER CO. 1.95
SW1611 KAY'S CAFE..... 1.95
SW1612 ACME MFG.CO. 1.95
SW1613 GENERAL STORE.... 1.95

WESTON FIGURES

MINI-FIGURE CO. — SUPER DETAILED..HAND PAINTED FIGURES & ACCESSORIES 65¢ EACH

200 ENGINEER.....
201 FIREMAN.....
202 RED CAP & LUGGAGE
203 RED CAP.....
204A STATION MASTER...
204B PASS.BRAKEMAN....
204C PASS.CONDUCTOR...
205 FREIGHT BRAKEMAN-HANGS ON LADDER...
206 FREIGHT CONDUCTOR BAGGAGE MAN CR STREET CAR MOTORMAN
207 FREIGHT BRAKEMAN.
208 DINING CAR WAITER.
209 PULLMAN PORTER...
212 HOBO,RECLINING....
215 LOAFER.....
217 MRS.SPUMONI.....
223 WALKING WOMAN....
224 MAN SEATED.....
228 OLD MAN WALKING...
229 YOUNG MAN WALKING.
230A SWEATER GIRL,RED-HEAD.....
230B SWEATER GIRL,BLONDE
231 FLEXIBLE FREDDY..
233 THE THINKER.....
234 OLD TIMER.....
235 KIBITZER.....
237 ENGINEER 1890....
238 MAN 1890.....
239 COP 1890.....
240 LADY 1890.....
241 TELEGRAPHER.....
242A BLACKSMITH ONLY...
245 SHERIFF.....
246 DRUNK.....
247 MAILMAN.....
248 STREET SWEEPER..
249 TELEPHONE LINEMAN.

ACCESSORIES (WESTON)

211B HOBO SEATED,WITH STICK AND BUNDLE.
213 HOBO,WALKING....
225 SECTION HAND WITH SHOVEL.....
227 SECTION HAND WITH PICK....75¢ EACH

100 SIX ILLUM.LAMP POST.. 1.80
102 HAND CAR..... 1.50
102-216 HAND CAR & RIDER. 2.00
103 POT BELLIED STOVE.... .25
104 CHAIR..... .25
105 WHEELBARROW..... .30
108 SECTION TOOLS (6)..... .60
109 RESTAURANT SET,GARBAGE CAN CASH REG. & COFFEE URN .30
119 HAND TRUCK..... .30
120 LAWN MOWER..... .30
121 SAW HORSE (2)..... .30
122 STEP LADDER..... .35
123-124 HAMMER & SAW.... .25
125 ACCESSORIES SET #119 THROUGH 124'..... 1.35

WESTON FIGURES

126 HOME MADE CHAIR..... .25
127 BOXES (SET OF 2)..... .30
128 CHECKER BOARD..... .30
129 ANVIL..... .25
132 SWEEPERS CART..... .30
210 LADY IN THE LAKE..... .60
210A LADY'S CLOTHES..... .30
211A SEATED HOBO WITH STICK, CAN AND FIRE..... .85
211B SEATED HOBO WITH STICK, AND BUNDLE..... .75
214 COMPLETE HOBO SET, THREE FIGURES & ACCESSORIES. 2.25
216 HAND CAR RIDER..... .60
218 PISTACHIO(SPUMONI JR) .50
219 MRS.SPUMONI,PISTACHIO & THE FAMILY WASH..... 2.65
220 OLD MAN ASLEEP..... .60
221 ASSORTMENT OF SIX FREIGHT TRAIN FIGURES..... 3.90
222 ASSORTMENT OF SIX PASSENGER TRAIN FIGURES..... 3.85
226-105 SECTION HAND WITH WHEELBARROW..... .90
236 CHECKER PLAYERS,SET OF 3 FIGURES,2 BOXES,HOME MADE CHAIR,SLEEPING DOG, AND CHECKER BOARD..... 3.00
242 BLACKSMITH WITH ANVIL AND HAMMER..... .95
243 COMPLETE SET OF OLD TIME FIGURES,6 FIGURES,ANVIL & HAMMER..... 4.00
248-132 SWEEPER & CART... .85
ANIMALS
400 DOG SCRATCHING..... .25
401 PIGEONS SET OF 6..... .60
402 COLLIE..... .25
403 DOG SLEEPING..... .25

MEW MODEL ENGINEERING WORKS

UNIQUE MINIATURES IN HO SCALE

SWITCH STANDS

S1 HI-LEVEL SWITCH STAND.$.90
S2 GROUND THROW SW.STAND...75
S30 HARP SWITCH STAND KIT...59
S31 HARP SW.STAND FINISHED..90

RAMAPO SWITCH STANDS
502 HIGH FOR MAN. SWITCHES..90
503 HIGH FOR ELECT.SWITCHES.75
504 LOW FOR MAN.SWITCHES...98
505 LOW FOR ELECT.SWITCHES..75

STAR SWITCH STANDS
509 HIGH FOR MAN.SWITCHES...98
510 HIGH FOR ELECT.SWITCHES.75

MINE ACCESSORIES
800 CALICO MINE SET.....$1.89 (WINER,CAR,PICK,SHOVEL, 2PCS.STRAIGHT TRACK)
801 WINE CAR ONLY..... .89
802 MINE TRACK STRAIGHT.....35
803 CURVED TRACK, 2" RADIUS.35
804 KICK SWITCHES,PAIR.....50
805 TIMBER CAR..... .89
809 "MIKE" THE MINER..... .65
810 PROSPECTOR 'PETE ..... .75

IRON HORSE MINIATURES

500 RAILWAY MAIL CRANE...$1.25
501 DERAIL SET..... $1.25
506 MARKER LAMP SET GGR..... .75
507 EXTRA MARKER BKTS..... .25
508 MARKER LAMP SET YYR..... .75
511 HAYES BUMPER..... .59
512 "AB" UNDERBODY SET..... .98
513 "K" UNDERBODY SET..... .98

COUPLERS & TRUCKS

KADEE — MKD SETO MAGNETIC DELAY ACTION WITH DRAFT GEAR 2 PR. 1.20; UNCOUPLING RAMP FOR ABOVE .98; RAIL LINE NMRA W/DRAFT GEAR INTEGRAL SPG. .50; L/DRAFT GEAR,INTEGRAL SPG. .35

RP-25 TRUCKS

BETTENDORF — ATHEARN.. .95; C.VALLEY.. 1.25; CLIFF LINE .95; LINDBERG.. .69

ARCH BAR — C.VALLEY. 1.25; M.D.C. .. .75; M.E.W. .. 1.25; KADEE.... .75

PASSENGER

4 WHEEL — C.VALLEY. 2.45; WALTHERS. 1.25; CLIFF LINE 1.89

6 WHEEL — C.VALLEY. 2.95; M.D.C. .. 1.10

SIGNAL BRIDGE

SILVINE "HO" SIGNAL BRIDGE S-61

ALL METAL WITH OPERATING LIGHTS.2 SETS OF RED AND GREEN TARGET SIGNALS.. 12 VOLT REPLACEABLE BULBS.. DETAILED GIRDER CONSTRUCTION. REG. 5.98 — READY-TO-USE 3.79

SUYDAM HO BUILDINGS & KITS ACCESSORIES

#522 NEW DIESEL HOUSE.....4.95

#87 MAIL POUCH TOBACCO BARN.....1.95
#1 FURNITURE FACTORY.....4.25
#7 WAREHOUSE.....4.25
#12 MIDWESTERN TYPE GRAIN ELEVATOR..... 4.25
#16 INDUSTRIAL OFFICES....1.95
#352 MINE HEAD FRAME.....3.95
#353 L.C.L. FREIGHT STA...2.95
#354 TIMBER OIL DERRICK...5.95
#751 TIMBER TRESTLE.....1.75
#761 DECK TIMBER BRIDGE...3.30
#762 THRU TIMBER BRIDGE...3.30
#796 1000 PROFILE TIES....1.95
#797 250 PROFILE TIES.....1.95
#798 500 PROFILE BR.TIES..1.95
#799 100 PROFILE NARROW GAUGE TIES..... 1.95
#351 TIMBER TUNNEL PORTAL.1.75
#350 WOODEN BARRELS 12 FOR .49
#251 OIL DRUMS 12 FOR
#201 EARLY DAY FLAT CAR...3.40
#202 EARLY DAY GONDOLA....3.50
#785 FREIGHT PLATFORMS....1.25
#786 PASSENGER PLATFORMS...95
#781 CATTLE LOADING PENS..1.35
#763 SINGLE TRACK TRUSS BRIDGE.....3.60
#764 DOUBLE TRACK TRUSS BRIDGE..... 5.65
#765 DECK PLATE GIRDER BRIDGE..... 2.95
#766 THRU PLATE GIRDER BRIDGE 3.30
#301 OPEN DECK PILE TRESTLE 1.75
#11 SAWMILL W/INTERIOR AND EXTERRIOR DETAILS.... $5.25
#15 BARTON FLATS LUMBER CO. 5.75
#14 (BLDG.ONLY)..... 4.25
#19 PACIFIC FOUNDRY.....2.95
#18 MINING CO. MILL.....2.50
#456 COMPLETE MINING INDUSTRY PACKAGE..... 16.50
#24 WYOMING COAL MINE.... 5.95
#8 3 STALL ROUNDHOUSE....5.75
#8X EXTRA STALLS (EACH)....1.25
#9 2 STALL ENGINEHOUSE...4.25
#80 YARD CONTROL TOWER....4.50
#73 MAIN STREET STATION...4.25
#71 YOUR HOBBY SHOP.....2.75
#72 FOLLIES THEATER W/LIGHTING 4.95

#75 TRIANGLE CAFE W/INTERIOR 4.25
#81 GRAND JUNCTION BOX WORKS 3.25
#82 PURINA CHOWS FEED MILLS.95
#83 SUNKIST EXCHANGE.....1.25
#85 WHEAT MEAT PACKING PLANT 3.95
#541 MODERN FACTORY.....2.25
#542 RAIL-TRUCK TERMINAL..2.25
#543 MODERN INDUSTRY.....2.25
#566 UNION ICE CO.....4.25
#571 OLD TOWN.....5.25
#572 OLD TOWN LODGINGS. .4.25

#504 STANDARD STATION.....2.95
#502 PASSENGER DEPOT.....4.25
#511 FREIGHT HOUSE.....2.95
#536 WATER TANK.....2.25
#500 SPECIAL PACKAGE OF OLD TIME STATIONS.....
#514 BOX CAR FREIGHT HOUSE1.95
#573 OLD TOWN BUSINESS BLOCK 4.95
#574 OLD TOWN HOMES.....3.95
#86 WELLS FARGO EXP. STA..2.25
#23 AGER, CHEM. & POTASH CO. ANNEX..... 6.75
#62 2 WAYSIDE SHELTERS.....95
#63 WAYSIDE SHELTERS.....95
#64 PASS. STA. COMPO.ROOF 2.95
#65 PASS.STA.SHEDCORRUG.. 2.95
#20 3 TRACK CAR BARN.....4.25
#21 2 TRACK CAR BARN.....3.95
#21D 4 TRACK CAR BARN....6.50
#61 INTERLOCKING TOWER & SHED..... 2.50
#4 BUCKHORN MINING CO'S ORE PROCESSING PLANT.....5.75
#5 BLACK BART MINE.....2.25
#6 RED LAKE MINE.....2.75
#17 MINING HOIST HOUSE 2.25

SEE OUR ORDER BLANK ON NEXT PAGE

EVERY DAY IS SAVINGS DAY AT AMERICA'S HOBBY CENTER — Order-By-Mail From AMERICA'S HOBBY CENTER, 146 C West 22nd St., New York, N.Y., 10011

ABC Sportscaster Chris Schenkel and family were chosen as Hobby Family of the Year by the Hobby Industry Association of America, in connection with April Is Hobby Month. Chris is shown here with son Ted at Carmen Webster's Model Railroad Equipment Corp. Store, in New York City.

good service. If you get stuck with a defective part, suggest you try these procedures, in the order given: (1) Take the defective part or item back to the dealer from whom you bought it. Remember, that items bought at discount very often are sold as-is, which means you may have to buy or scrounge around for suitable repair parts. Most dealers will attempt to remedy the defect. If the item was bought by mail, include the order number, date, and any other pertinent information. (2) Sometimes it is impossible to go back to the store where you bought the item. Best bet is to buy whatever repair parts are needed. If you bought at a discount house which now refuses to service your item, do take it to the nearest full-function hobby shop for service, and don't squawk at the bill. The hobby dealer has a family to support and chances are he isn't driving a Cadillac. His prices are fair. (3) If parts can't be obtained locally, contact the manufacturer or importer. Keep letters short and to the point. A stamped addressed envelope or postcard can often speed up replies. Supply all pertinent data. Allow a reasonable time for reply. In season, up to a month. (4) In some cases, it may be easier to buy new or substitute parts than to try and get replacement parts from the manufacturer. If in doubt, ask your dealer. (5) Warrantees should be read carefully when supplied with your item. In very rare cases you might wish to contact the local Better Business Bureau, where fraud or similar situations are involved. We occasionally receive letters from irate customers with sheafs of correspondence regarding some purchase. Such situations usually resolve themselves in time. In most cases such problems can be traced to poor illegible handwriting, not being specific, and also to new employees who sometimes make mistakes. Don't we all? Ed.

SPECIAL MAIL-ORDER VALUES FOR "HO" MODEL RAILROADERS

AHC

Order-By-Mail From America's HOBBY CENTER, 146 West 22nd St., New York, N.Y. 10011

TRACKSIDE BUILDINGS

ATLAS KITS DETAILED HO SCALE PLASTIC BUILDINGS.

757 LUMBER & SAW MILL $2.98

#731 CHAPEL ON THE HILL $1.29

#732 TWIN LOG CABINS $1.29

KITS

#732 TWIN LOG CABINS $1.29

#771 14 STORY OFFICE BLDG. $4.98

728 SUMMER COTTAGE. 1.29
729 4 GREEN HOUSES. 1.29
730 FLAG STOP STN. 1.29
737 RANCH HOUSE.... 1.49
738 SPLIT LEVEL.... 1.49
739 2 HOUSES UNDER CONSTRUCTION... 1.49
740 SHELL GAS STATN 1.49

701 GATE TOWER... .69
702 TRACK SHANTY. .69
703 WATER TOWER. 1.49
704 SIGNAL TOWER 1.49
705 TEL.SHANTY & POLE..... .49
706 PASS.STATION 1.98
707 STA.PLAT.SET. .98
714 WAREHOUSE SML .98
715 COCA COLA STD .98
716 STONE DWELLING.98
717 BOAT HOUSE... .98
718 BARN/CORN CRIB.98
718 RURAL BARN... .98
720 RANGER STATION.98
726 LUMBER SHED. 1.29
727 BARN & SHED. 1.29
749 FREIGHT STATION 1.98
750 LUMBER YARD & OFFICE BUILDING 1.98
751 MODERN HOME.... 2.49
759 WATERMILL..... 2.98
759P WATERWILL PUMP 2.98
760 ROADSIDE RESTAURANT..... 2.98
775 12 TELEPHONE POLES..... .49
776 FENCE & GATE.... .69

Revell BUILDINGS

SMALL TOWN STATION T-9001 1.98 KITS

OPERATING ENGINE HOUSE #T-9028 2.98

SUPERIOR BAKERY #T-9037 2.98

FREIGHT STATION #T-9020 1.49

TRACKSIDE BLDGS. #T-9002 1.98 5 PC. SET

FARMHOUSE SET 8 PC. SET #T-9003 1.98

BARNYARD SET #T-9015 1.98 9 PC. SET

SUYDAM

HO BLDGS. & STRUCTURES

BLACK BART MINE 2.28 KITS

METAL KIT
*WE PAY POSTAGE ON ORDERS OVER $3.00

11 SAWMILL W/DETAIL..5.25
15 BARTON FLATS LUMBER CO..... 5.75
14 WATER HEATER CO. 4.25
19 PACIFIC FOUNDRY.. 2.95
18 MINING CO.MILL... 2.50
456 COMPLETE MINING INDUSTRY PKG.. 16.50
24 WYOMING COAL MINE 6.95
8 3 STALL ROUNDHSE 5.75
8X EXTRA STALLS EACH 1.25
9 2 STALL ENGINEHSE 4.25
80 YARD CONTROL TOWER4.50
73 MAIN ST. STATION. 4.25
71 YOUR HOBBY SHOP.. 2.75
72 FOLLIES THEATRE.. 4.95 WITH LIGHTING.
75 TRIANGLE CAFE W/INT 4.25
81 GRAND JUNCTION BOX WORKS..... 3.25
82 PURINA CHOWS FEED MILL 3.95
83 SUNKIST CITRUS 3.25
85 SWIFT MEAT PKG.PLT3.95
541 MODERN FACTORY 2.25
542 RAIL.TRUCK TERM 2.25
543 MODERN INDUSTRY. 2.25
566 UNION ICE CO.... 4.25
571 OLD TOWN..... 5.25
572 OLD TOWN LOGGING 4.25
502 1887 PASS.DEPOT. 4.25
511 1886 FREIGHT HSE 2.95
536 1870 WATER TANK. 2.25
514 BOX CAR FREIGHT HOUSE..... 1.95
573 OLD TOWN BUSINESS BLOCK..... 4.95
574 OLD TOWN HOMES.. 3.95
522 NEW DIESEL HOUSE 4.95
86 WELLS FARGO EXP. STATION..... 2.25
87 MAIL POUCH TOBACCO BARN..... 1.95
23 AKER.CHEM.& POTASH COMPANY ANNEX... 6.75

AHC CORK ROADBED
25 for $5.99
NATURAL COLOR 25¢ EA
FLEXIBLE..EASILY CURVED TO MATCH YOUR TRACK LAYOUT...
AHC CORK SWITCH BLOCKS #4 or #6 25¢ EA

3 WAY SWITCH
BRASS RAIL... ON REALISTIC TIE STRIP.... FULLY INSULATED 4.95
NICKEL SILVER...$5.95
DOUBLE CROSSOVER
BRASS..... $7.95
NKL.SILVER.$9.95

"HO" Switches 1.25 EA.
OUR OWN AMTRON BRAND. ASSEMBLED #4 or #6 RH or LH
NICKEL SILVER 1.95 EA. BRASS

SALE • HO TRACK SPECIALS
3 FT. FLEXIBLE TRACK 49¢ MINIMUM OF 5 PIECES
Our own "Amtron" brand. Made to our own & NMRA specifications. Solid brass "T" rail on heavy fiber tie strip. Nckl Silver 69c
(Brass) 25 for $10.00
Atlas Track -3 Ft. -75c

HO FIGURES
29¢ #81 SET OF 3 METAL FIGURES, FIREMAN BRAKEMAN AND ENGINEER
98¢ SET OF 48 PLASTIC PEOPLE & PASSENGERS
PEA LAMPS . . . 12 volt with leads. Choice of Red, Green, Amber or White 5 for 49¢

TRACK AND LAYOUT WIRING
64 PAGE 25¢ MINI-BOOKS
MODEL RAILROADER
WRITTEN BY: PAUL MALLORY
R1 BASIC ELECTRICAL BOOK
R2 TRACK & LAYOUT WIRING
R3 POWER SUPPLY/ACCES.WRNG.
R4 ELECTRICAL DATA BOOK
R5 GUIDE TO MODEL RAILROAD
R6 GET MORE OUT OF- MODEL RAILROADING
R7 HOW TO BUILD- YOUR OWN RAILROAD

BOOKS for model rails
NEW!! ATLAS CUSTOM LINE KING SIZE PLAN BOOK, by; John H.Armstrong & Thad Stepek.MEASURES:11"x 17" INFORMATION ON MAKING A VARIETY OF LAYOUTS PLUS LISTINGS OF MATERIALS NEEDED, 3.00
ATLAS
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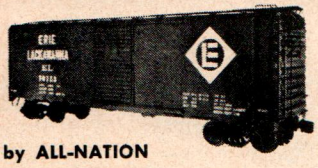

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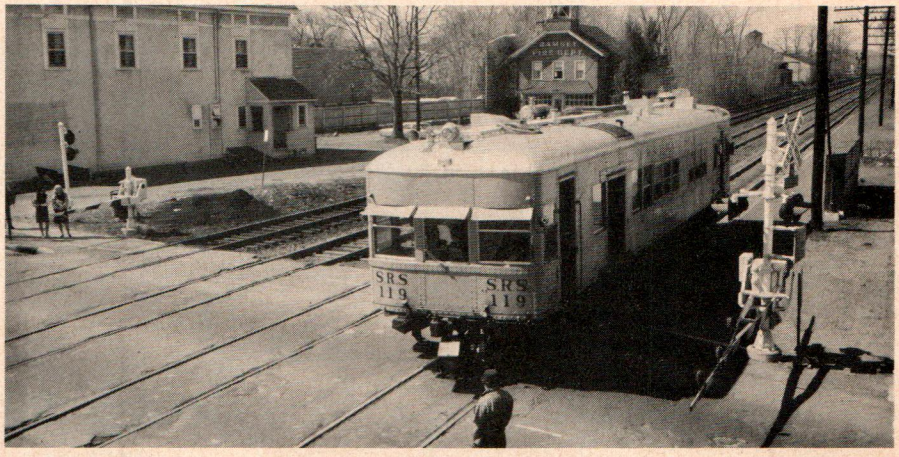
In The Catbird Seat

In mid-April our railfan hotline informed us that a special was heading north on the Erie, consisting of three low hoods, a PRR Clearance Car No. 497125 complete with a railroader enjoying his ride, and a caboose. Snapped out of our editorial window. Then,



about a week later we heard the high pitched "toot" which could only be our twice a year Sperry Rail Detector, back for a visit. Two defects were found in the rails imbedded in our Main Street.

DISPATCHERS REPORT

O Gauge

WE HOPE it won't shock O gaugers too much to learn that their gauge is perhaps more correctly termed "Zero" gauge, if they are to follow the designation created by Maerklin back in the days when that German firm originated a system of sectional track and gauge sizes, before the turn of the century. The series included sizes O, 1, 2, and 3.

Scale O gauge is doing quite well, thank you, despite a few prophets of doom. A good variety of kit and brass steam and diesel locos are available, soon to be supplemented with several types of low hood growlers. *Main Line Models,* P. O. Box 250, Falls Church, Va., just released a new line of all wood freight car kits, the first being a 36 ft. stock car kit now available in 12 road names with 6 more to come. These list at $9.95 less trucks and couplers but have prepainted and silk screen lettered sides and ends. See May RMC for Test Track review.

All-Nation has just printed its 10th catalog, listing nothing but O gauge equipment by All-Nation Line and other suppliers. Interesting new O boxcars in tuscan red: NP billboard, UP Be Specific, Milwaukee Road large lettering, Rock Island block lettering, large C&EI, and IC Main Line of Mid-America. These are all metal cars built around a wooden box, and list at $7.40 less trucks, with silk screened, pre-painted sides. The catalog is $1.00, from Box 145, Des Plaines, Illinois.

The large size of O gauge drawings makes it difficult to publish them with any regularity in RMC, since they take up so much space. Almost all drawings appearing in RMC are suitable for use by O gauge modelers, or by modelers in any gauge. The hard way is to transpose each dimension by hand. The easy way is to have

the drawing enlarged to ¼ inch scale at your local neighborhood photostat house. On an HO drawing, 5½" should be enlarged to 10". RMC drawings may be reproduced for your own personal non-commercial use only, as they are fully protected by copyright.

Coming up in O gauge is a GP-35 from *Central Loco Works,* an outside braced boxcar with silk screen lettered sides by a manufacturer who'd just as soon remain anonymous for the present so he won't have to answer mail which will keep him out of the shop, plus more new imports from *U. S. Models.*

HO

And in Half-Zero Gauge, a new *Kemtron* HO-HOn3 Parts Catalog No. 7. For the first time, this catalog has been prepared in loose leaf form. Listed is the complete line of Kemtron lost wax and other parts for steam and diesel locos, cars, in both standard and narrow gauge. The 8½x11 3-ring pages, 46 in number including a cover, will be followed by sections devoted to track and trackside equipment, tools, materials, kits and other subjects. The catalog lists at $1.00 and can be obtained by writing Kemtron, P. O. Box 1952, Fresno, Calif. 93718. A number of mounting suggestions are included.

Walthers new 1966 HO catalog is out, $1.00, from 1245 N. Water Street, Milwaukee, Wisconsin 53202. The entire Walthers HO and Marnold line is included, along with many HO specialty lines which are musts to any serious model railroader: Arvid Anderson, Rollins House, Jordan, MEW, MDC, Rail Line, and more. 8½x11 100 p.

Lazy Axe Models, P. O. Box 3142, Granada Hills, Calif. 91433, is a new outfit producing HO structure kits and a line of oldtime O scale cars. The HO structures are of precut scribed 3-ply plywood construction. Initial structures include a Hotel at $2.95, Store at $1.95, Cafe at $2.95, Store at $2.95, Saloon at $3.50, Blacksmith at $1.50, Stable at $2.25, and Pumphouse at $1.75. The firm also supplies them custom built. The kits do not include signs or lettering. The O gauge cars include a gondola, flat car with load, hopper car, and log car with load. All are 28-30' oldtimers with clear pine parts cut to fit, less trucks and couplers. Price range $4.00-4.50. Cars also available for On3 at same price. Illustrated price list is free if you send a stamped addressed envelope.

George Stock, 83 West Sedgwick Ave., Philadelphia, Pa. 19119, advises that he can supply Pennsylvania Railroad 4-wheel passenger truck sideframes and bolsters in HO, less wheel sets, and to clear 'em out, he'll send enough for 5 cars to anyone sending 50c for postage and handling. George also has thousands of old Megow brass wheels, insulated and uninsulated, for which he'll intertain any reasonable offer. The PRR sideframes, incidently, are also the onetime Megow cast units, probably the only PRR 4-wheel HO sideframes available. George also does custom work in HO and O.

More New Stuff

Wagner Car Company, 59 Euclid Ave., Wyoming, Cincinnati, Ohio 45215, has a new O gauge trolley truck with optional 33" or 36" wheels, DC-62 powered with 20:1 gear ratio, with the following optional wheelbases: 4'6", 5'0", 6'0", 6'6" , 7'0". Height is ⅞", making this an underfloor unit. Wagner's new folder illustrates four different Wagner trucks, all equipped with the new Barney & Smith "F" sideframe. Most powerful is the DC71 truck used in freight service. All are designed for use in the LaBelle Lake Shore Electric car body series.

Two small journals of interest to the modeler are the *S Gauge Herald,* devoted to the promotion of 3/16" scale, and *Fine Lines,* for the O gauger wanting to venture into pure scale. A free brochure is offered by S Gauge Herold on S scale, Box 105C, Oradell, New Jersey. Fine Lines is published three times a year by Robert W. Brown, 985 Campbell Ave., Los Altos, Calif., at $2.00 per year.

RMC staffers would like to know what type of binder RMC readers like best. Currently we offer a box type of holder which holds about 18 issues.

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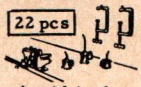

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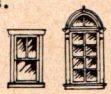
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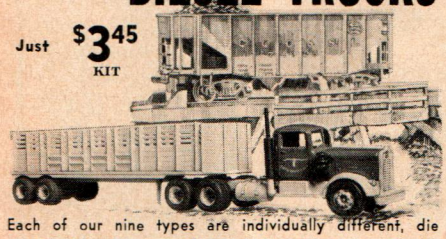

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Other binders preserve the magazines more in the form of a book, with wire inserts to hold the magazines in place. We will try to make available whatever binder our readers like best.

Gem Models, 160 W. Chelten Ave., Philadelphia, Pa. 19144, has just issued its 1966-1967 catalog, 5½x8½ with a full color cover, listing its complete line of HO locomotives in the Olympia, Fuji, Seiko, and Imperial lines. These are all Japanese hand crafted imports. Included is an O scale 2-4-4T and an On3 2-6-0. The catalog lists at 75c.

From *Badger Air-Brush Co.*, 9201 Gage St., Franklin Park, Illinois 60131; a free brochure describing their low cost air brush at $5.98, adaptable to use of aerosol pressure can, spare tire, or compressor use. Air brushes are preferred by many advanced modelers for the very finest model painting uses. The air brush can use any preferred brand of model railroad paint.

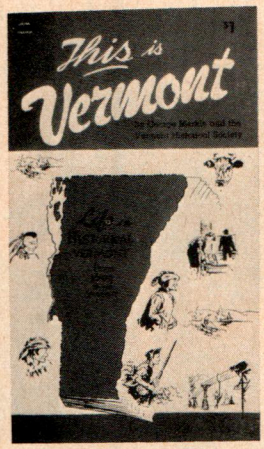
Observation Car

ABC sportscaster Chris Schenkel and family were chosen by the Hobby Industry Association of America as its "Family of the Year" . . . International Models Inc., 33 Union Sq. West, N. Y. C., N. Y., is closing up shop after 35 years. Unfilled orders are being processed as rapidly as possible but the management requests the indulgence of those whose orders have not as yet been filled . . . Sy Rao, formerly of Highway Hobby Shop, has joined Rich Palmer's Hobbytowne as manager, at Parsippany, N. J. Rich's outdoor 24" gauge railroad is well worth the ride . . . N gaugers should send for the Vollmer catalog listing many structures for 2mm. scale, available from A. B. Boyd Co., 1030 S. Grand Ave., Los Angeles, Calif., 50c in full color. Over 100 HO structures also listed.

Atlas Tool Co.'s King Size HO track plan book, mentioned in our April issue, now available at hobby shops everywhere or direct from Atlas at 378 Florence Ave., Hillside, N. J., upon receipt of $3.00. The book includes complete wiring instructions, control panel diagrams, scenicking methods, and other ideas for making a variety of HO layouts with Atlas Custom-Line track, though the ideas presented are suitable for any gauge or brand of track.

Cal-Scale parts for super detailing HO locos and cars are available from Cal-Scale, P. O. Box 475, Pinedale, Calif., if your dealer can't supply you. Illustrated folder of Cal-Scale parts is 15c and is a must for any advanced modeler.

Nathan R. Preston & Co., P. O. Box 187, Des Plaines, Ill. 60017, advises substantial reduction in prices on their Viking vehicle line, due to reduced tariffs, which they are passing along to their customers. The new prices are listed in Preston's June



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VIKING Catalog 35

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and July RMC ads. The Viking catalog is 35c and depicts many of the vehicles: cars, trucks, buses, trailers.

Old time locomotive fanciers should send for the *Polks Hobbies* catalog, Dept. RRMC 16, 314 Fifth Ave., New York, N. Y. 10001, enclosing 15c. Listed are a series of rare and famous old locomotive types, manufactured in Japan by New One in HO, including a 2-2-2, 2-6-0, and other unusual and not-so-unusual types. Locos come painted, ready-to-run, and lend themselves to easy detailing with their cast metal construction. Prices are low.

Sattler's HO Depot, a specialist in switches and other special trackwork, has come up with an HO gauge crossover mounted on 22" and 24" radius curves, built on the 2¼" spacing of Tru-Scale roadbed on which it is mounted. Other radii as available on Tru-Scale roadbed curves are optionally available, either direct from Sattler or through your local dealer.

The curved crossovers are offered in code 70 nickel silver and also in either nickel silver or brass in standard code 100. Needless to say, such crossovers enable the modeler to build layouts not otherwise possible.

Zip Your Mail

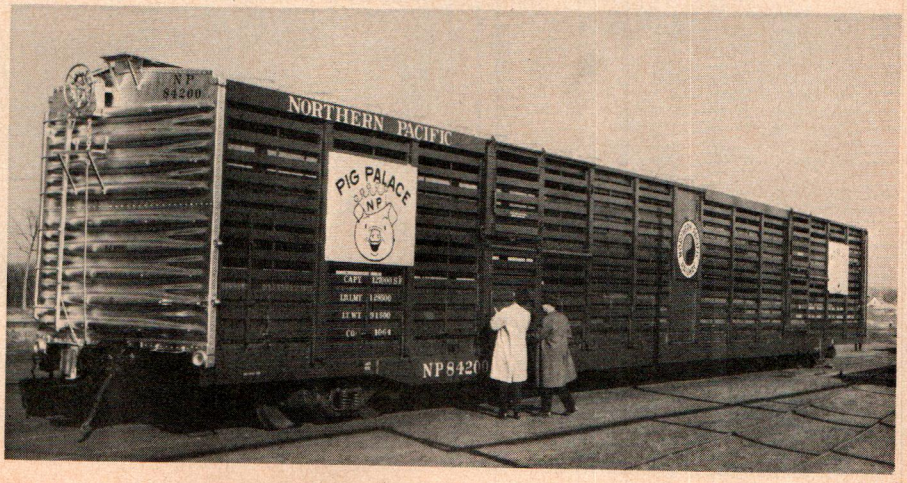
For about a year, Railroad Model Craftsman's subscription list has been about 99% zip-coded, in line with the Post Office rulling that such zip-coding be mandatory on all mailing lists by Jan. 1, 1967. We urgently request that all new subscribers include their zip-code with their address, or whenever requesting information about their subscription.

Possibly by the time you receive this issue, we will have completed a refiling off all subscription records from geographic-alphabetical, to zip-code-alphabetical. Thus when our circulation people look up the subscription for John Jones in Ramsey, New Jersey; they will no longer look up New Jersey and then Ramsey. Instead they'll look up 07446.

The Post Office has been refining its zip-code slightly, with the result of some changes. Such changes, in most cases, are not critical, and require the changing of the last two digits of a zip-code number only.

Zip-coded mail will be rushed to new postal centers, designated by the first three digits in the zip-code number, as 074 for Paterson, New Jersey. The last two digits would indicate the specific post office in that center, 46 being the designation for Ramsey. Your zip-code number should be included whenever you write any RMC advertiser, or anyone.

86 ft. Pig Palace built by Northern Pacific at its Como Shops in St. Paul can carry up to 325 hogs, or calves or lambs. HO plans for the car appered in June 1966 issue of RMC. Car has 8 doors.



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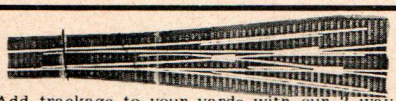

Add trackage to your yards with our 3 way Lap Switch. Switch made with No. 8-10-6 frogs. No car or loco restrictions.....$15.50

OTHER CUSTOM SWITCHES

No. 5, 6, 7, 8, 10 Right or Left	$ 4.50
No. 6, 7, 8, 10 Crossovers	8.95
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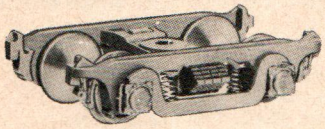
HOn3 and Dual gauge also available. Mounted on Tru-Scale or fibre roadbed. Choice of nickel, silver or brass rail. Code 100 or code 70.

NEW! Curved Crossovers $15.00

SATTLER'S HO DEPOT
1510 Cedar Ave. Cincinnati, Ohio 45224
Dealers' Inquiries Invited

NEW! HO Micro-Motive RP-25 Low-Profile Freight & Passenger Car Trucks and Wheel Sets



201 Roller Bearing 4-Whl. Passenger	Pr. 1.69
202 Exp. Reefer as above but 33" Whls.	Pr. 1.69
101 Bettendorf 50 Ton Frt.	Pr. .95
103 Archbar Freight	Pr. .95
106 Symington Hi-Speed Roller Brg. Frt.	Pr. .95
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133 Replacement 33" Wheels, Set of 4	Pr. .49
126 Replacement 26" HOn3 Wheels, Set of 4	Pr. .69
136 Replacement 36" Pass. whls. Set of 4	Pr. .69

Our new RP-25 Low Contour trucks and wheel sets provide up to 50% increased power for locos and far less dirt build up on flanges. Less friction, bind, and dirt means better operation.

Replacement wheel sets use Torrington axles and will fit most popular trucks without alteration. **All New Cliff Line Trucks and Wheelsets now covered by NMRA Warrant No. 53! Upgrade all your HO equipment. Switch to Cliff Line.**

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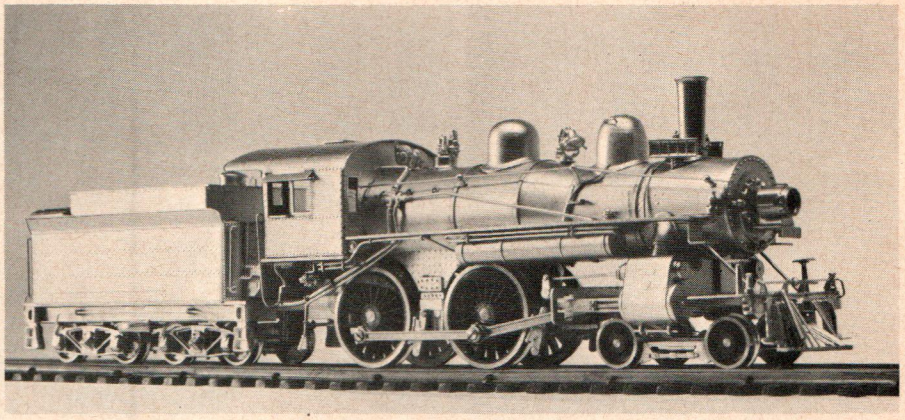
TEST TRACK



Southern Pacific 4-4-0 class E-23 built by Fujiyama Kogyo for Pacific Fast Mail in HO also operated over T&NO tracks and was alternately equipped with a Vanderbilt tender. Loco dates 1900.

T&NO—SP E-23 4-4-0: HO

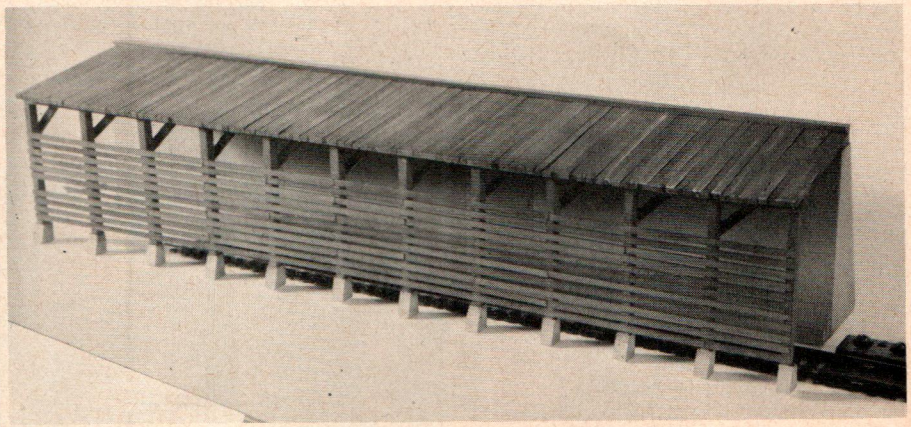
Mfd. by Fujiyama Kogyo for Pacific Fast Mail, P. O. Box 57, Edmonds, Wash. 98020.

This 4-4-0 was built for Pacific Fast Mail by Fujiyama Kogyo Co., a builder who previously has turned out the PFM Crown Series models. The 4-4-0 sets a high standard, which we would expect are also found in the companion SP Mogul, now also available from PFM by the same maker. The 4-4-0 ran well and except for one minor complaint which we easily remedied, and which the importer and manufacturer have already corrected as noted later, is highly recommended.

The engine is a small modern eight-wheeler that should appeal to those who want a small passenger engine that isn't too primitive. These engines are modern in the sense that some survived until the 1950's.

Thirty of the engines were built by Cooke and Schenectady in 1899 and 1900 for the Southern Pacific and Galveston, Harrisburg and San Antonio, the latter becoming part of the Texas & New Orleans. 16 of the Southern Pacific engines went to the T&NO in 1902, of which 8 went back to SP by 1912. This shuffling of engines from west to east and back is interesting mostly for numbering information. Engines on the T&NO were numbered 261-280 while the SP locos were in the 1100, 1400 or 1500 series, depending on the era. The exact numbering and renumbering was rather complex and would require a table to illustrate properly. One engine, 1438 carried the same number through its lifetime, while another had five different numbers. The last of the series to go to the junk pile was No. 268, scrapped in 1953.

Anyone interested in fittings and tender variations might check the plans, either in RMC for Sept. 1953, or the RMC Steam Locomotive Plan Manual (currently out of print). The model at hand, imported by Pacific Fast Mail, is of all brass construction with coined fittings plus Cal-Scale investment castings. Included are brass brake shoes and rigging on all engine wheels. Driver shoe hangers



Snow shed kit from Mil-Scale is rarely seen on model pikes. Kit assembles easily with most parts precut to length. HO model measures 110 scale feet in length, over 15 real inches.

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AT YOUR HOBBY SUPPLIER

OUR 3 FOOT FLEX TRACK HAS MANY FEATURES:

- Can Be Tightly Curved Without Affecting Gauge
- Exact Scale Rail Profile (Code 100)
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Brass #2530 75¢ Nickel Silver #2630 98¢

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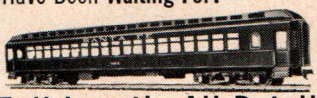

Full Length, All Detail Shown (incl. Underframe), Ready-To-Run, Metal Wheels. #6264 Santa Fe #6274 Pennsy #6294 N.Y.C. ONLY $3.98

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Your Passenger Train Is Not Complete Without an R.P.O. Car. All Of The Features Of Our Other Passenger Cars Are Included In This Car, Plus Extra Features of Metal Wheels.
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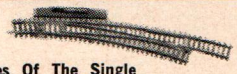

Brass Right Hand #2515 ..... $5.95
Brass Left Hand #2516 ..... $5.95
Nickel silver Right Hand #2615 ..... $6.95
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All New Improved Minimovers, Fantastic Details. Many Movable Parts. Some Prices Have Changed.

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Metal Wheels Will Not Pick Up Dirt, Go-Through Switches Better, Lower Center of Gravity, and Roll Much More Easily. (Your Loco Will Pull Almost Twice As Many Cars if They Have Metal Wheels.)

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THE FINEST IN HO FROM AROUND THE WORLD

are individually attached with small screws. The driving wheels are all sprung 73" size. In order to balance the rather long overhang forward of the drivers, all weight has been put into the cab. Our model handled a train suitable for an engine this size and even negotiated several heavy brass cars up a modest grade. Do not add weight forward of the front drivers, should you decide this is necessary.

The only problem encountered with our test engine was that it ran backwards from the usual standard. We remedied this easily by reversing the magnet block in the motor. A call to Art Finlan, of Pacific Fast Mail, revealed that the magnets were indeed mounted in reverse on the first run, but PFM made the correction on all remaining engines in stock and the second run was corrected at the factory. As mentioned, the engine will run as per standard by reversing the magnet, held in place with one screw, should your model be uncorrected.

Current consumption was normal for an engine this size equipped with a Japanese DC-195 motor. The model throttled down to a slow speed without any run-in period. At 5-8 volts, amperage drawn was about .3 amps. Full throttle produced a realistic but not excessive top speed. The loco weighs 15 oz. and ran around 15 inch radius curves without trouble. Overall length is 8½ inches.

The E-23 is priced at $34.95 ready to run, unpainted, and is to be a standard production model with Pacific Fast Mail. To this SP fancier, she is a delight. JW.

AREA Rail Sections: O Scale

Mfd. by Gene La Vancil, 10672 Ohio Ave., Los Angeles, Calif. 90024.

Gene La Vancil is offering .148 rail scaled for O gauge use directly from an A.R.E.A. 132 lb. rail section. The rail specs out as follows: height .148", base .125", head width .062", and web, .021". The rail is offered in steel at $8.95 per 99', and in nickel silver at $14.95 per 99 ft.

A lighter weight rail representing the A. R. E. A. 100 lb. rail is also offered. Specs on this rail are height of .125", base .112", head width .056", and web .021". Offered in 99 ft. bundles at $9.50 for steel and $14.50 for nickel silver.

For the .148 rail, La Vancil also offers rail joiners. Type A are brass investment castings with a web hold-

(Continued on page 56)

RMC TIMETABLE

NOTE: Items for RMC TT are welcome but must be received 6-8 weeks before issue in which item is to be inserted. Please print or type.

DENVER, COLORADO. Oct. 9. Rocky Mountain Region Fall Convention. For further details contact: Ralph W. Hawes, 8223 Adams Way, Denver, Colo. 80221. Phone: 429-8668.

BOISE, IDAHO. Aug. 5-7. Pacific Northwest Region (host, 5th Div.). Clinics, contests, slides, movies, Boise Area Model RR Club, private layouts, banquet. 200-mile steam pwrd. spec. train ride on U.P. main line Boise to Huntington, Ore. and return. Info. & reserv. contact: James Dunbar, P. O. Box 4242, Boise, Idaho 83705.

Regional Meets

BEDFORD, OHIO, Sept. 30, Oct. 1-2. Western Reserve Model RR Club Trolley Meet, 30 South Park St., Bedford. Op. O & Ho trolley and steam layouts will be featured. Info, contact Warren D. Smalley, WRMRC, Box 282, Bedford, Ohio.

Old Toy Train Meet

GARFIELD, N. J. July 17. Symposium at American Legion Hall, Garfield. 7 A.M. until closing. $2.00 entry fee. Prizes. Contact William Vagell, 27 Passaic St. for details. Phone 201-777-4331.

Club Shows

HAMMOND, IND. Sept. 10-11. State Line and Indiana City Model RR Club Fall Open House, 4601 Hohman Ave. Hours: 1-6 PM. Adm. free. Further info. contact Jim Plenus, 837 - 169th Pl., Hammond, Ind.

Club Notices

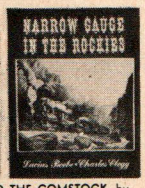
HICKSVILLE, LONG ISLAND, N.Y. West Island Model Railroaders—contact Jim Clokey, 457 Clocks Blvd., Amityville, N.Y. 11701. New members welcome.

TAMPA, FLA. Tampa Bay and Southern RR (HO) seeking limited amount of members. Layout under construction. For info. call or write Ladd Houda, 2314 Carroll Pl., Tampa, Fla. Phone: 932-6923.

EAST WEYMOUTH, MASS. South Shore Junior Model RR Club, 12 Cain Way, looking for new members, age 15-20 yrs. Meetings every Sun. 2:00 P.M. Visitors welcome.

GREAT BOOKS for model rails

A TRAINLOAD OF GREAT

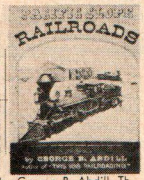


505—STEAMCARS TO THE COMSTOCK, by Beebe & Clegg. The Virginia & Truckee and the Carson & Colorado in picture and prose. A collection of rare old pictures and three oil paintings by Howard Fogg. 8x11, 100 pages, maps, over 120 illustrations. **$4.50**

502—NARROW GAUGE IN THE ROCKIES, by Lucius Beebe and Charles Clegg. A large volume on slim pikes of Colorado, Utah, and New Mexico: D&RG, Mears short lines, DSP&P, F&CC, Uintah, and RGS. 224 pages, 250 illustrations, 8x11. Second printing. **$8.50**

501—O&W, by William F. Helmer. The birth, the life, and the death of the railfan's railroad. 228 pages 6x9 with 150 photos, maps, timetables, and a complete motive power roster. Camelbacks, diesels, trestles: all beautifully depicted. "A must in every railfan's library" says Hal Carstens of RMC. Dust jacket and frontispiece by Otto Kuhler. **$5.00**

512 — BALDWIN LOCOMOTIVE WORKS, 1881 Catalog Reproduction. A rich looking volume handsomely bound in brown with gold leaf lettering. Covers many of the locos produced by Baldwin with photos and data. Letters and comments on early BLW locos. 8x11, 153 pgs. A collector's type book. **$10.00**



736—RAILS WEST, by George B. Abdill. Th final volume in the Abdill rail trilogy. Chapter cover the Middle Border, Northern Plains South-Southwest, Rocky Mountains, and Pacific Coast. This book is loaded with page after page of rare steam loco photos, for those who love them **$12.50**

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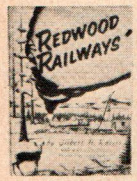

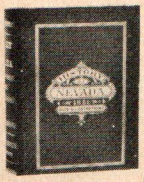

506—REDWOOD RAILWAYS, by Gilbert H. Kneiss. The story of the little roads which grew up into the Northwestern Pacific RR. 40 full pages of illustrations, 16 area maps, 2 pocket maps of entire system. Over 200 pages, 6x9. **$4.75**

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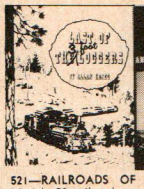
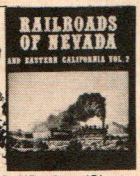
162—LAST OF Th 3 FT. LOGGERS, Kreig. Story of the West Side Lumber and Hetchy Hetchy & Yosemite Valley lines. 96 pgs., 190 illus., 8½ x 11, hardboard **$6.95**





521—RAILROADS OF NEVADA, VOL. 1, Myrick. 50 railroads are covered in this first of 2 volumes of Nevada RRs. Beautifully printed, Special maps **$12.50**

527—RAILROAD OF NEVADA, VOL. 2, Myrick. Covering the Southern Roads in a deluxe presentation. Profusely illustrated **$12.95**

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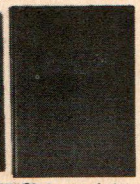
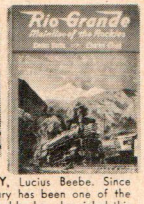
850—SPEED LIMIT 30, Downs. The story of the narrow gauge branch lines of the Australian Victorian Railways. 130 pgs., 5½ x 8½, hardboard **$6.00**

531—RAILWAYS OF AUSTRALIA, Singleton & Burke. Changes in Aussie RRs from steam to diesel. 176 illus., 3-color foldout map, 8½ x 9, 160 pgs., cloth bound **$5.00**



156—LIMA LOCOMOTIVES, Reprint of 1911 Builders catalog. Incomparable gathering of illustrations, data, descriptions of all types built by this mfr. including Shays. Colorful dust jacket. 48 pgs., 8½ x 11, paper bound. **$3.00**

524—ROGERS LOCOMOTIVE WORKS CATALOG reproduction including history, origin and growth of company from 1831 to 1886. Limited edition of 1250 copies. 200 pgs., 8 x 11, brown cloth **$10.00**



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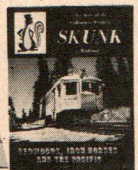

164—KANSAS WEST, Anderson. The Kansas Pacific and the D&RG. Scholarly work with 90 illus., 2 Kuhler paintings. 264 pgs., 6 x 9 hard bound **$6.95**

423—THIS WAS RAILROADING, by George B. Abdill. You'll thumb through this fascinating volume many times to study the more than 350 rare old photos before you'll even start on the text. Hard to say which are more intriguing: the old locomotives or the breathtaking scenes of bygone railroading. Plenty of trestles, wrecks, equipment and ROW scenes. This book is pure railroading with all of the cinders and soot. A must. 8½x11, 192 pages. **$3.95**

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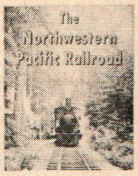

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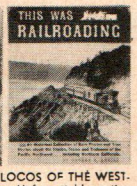

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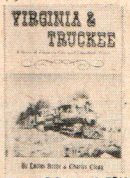

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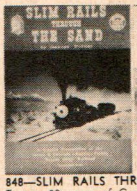

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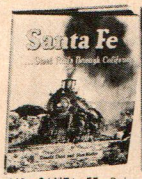

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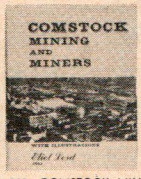

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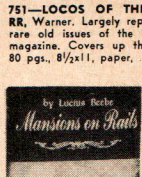

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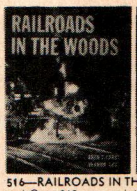

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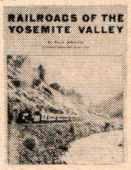

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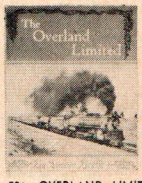

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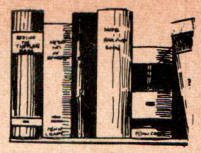

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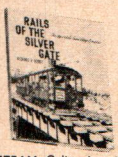

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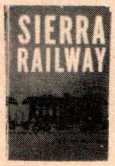

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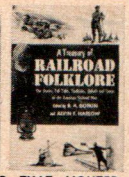

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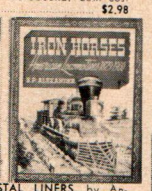

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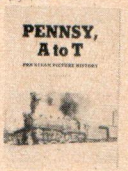

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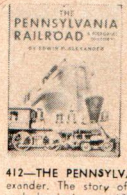

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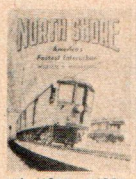

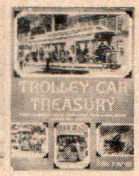

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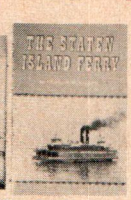

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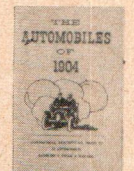

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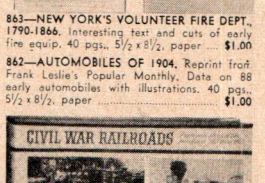

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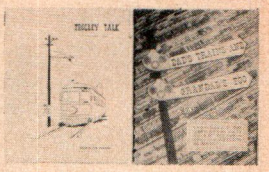

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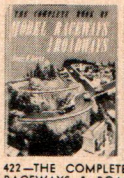

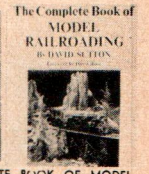

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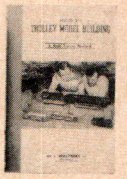

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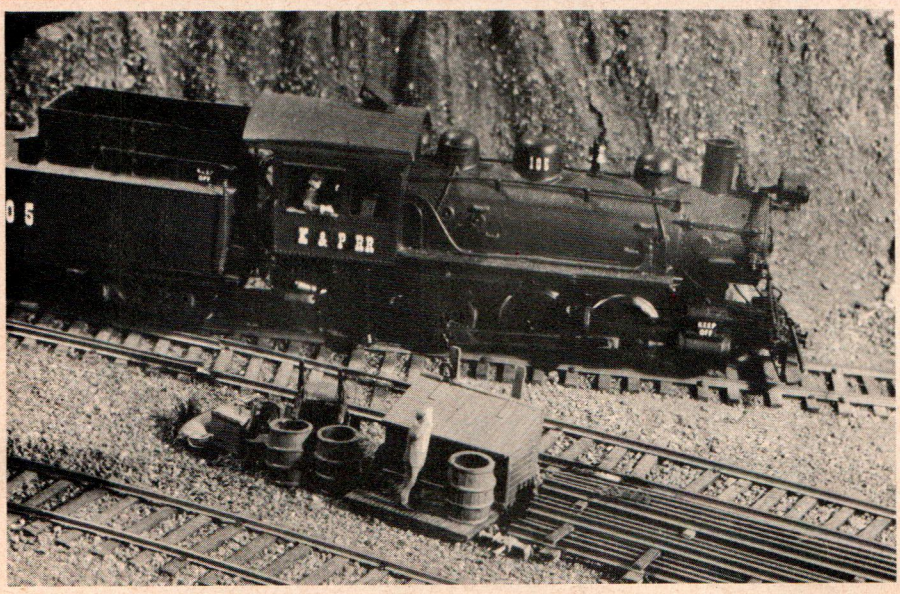


by John Coots

How one Modeler is building his railroad in easy sectional stages, while enjoying himself immensely.

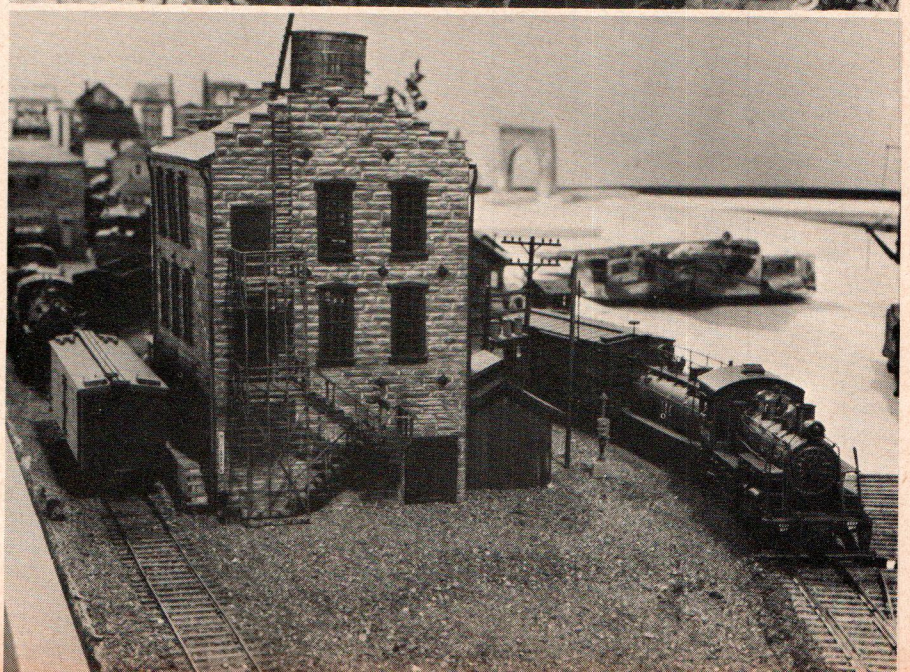
ABOVE: Anderson Sidings is a small community located midway on the Kilt & Pipe Railroad Co's. mainline. From here, road President McIntyre runs his feeder line connecting the two class I roads that skirt the region.

LEFT: Eng. 105 heads into the turntable after a busy day switching at Anderson Bidings.

TOP: Our ace photog scrambled up the cliff to catch a PFM-built RGS emerging from under the trestle. Looks like another miner on his way.

CENTER: Bitter Creek Trestle spans the tracks of the narrow gauge subsidiary, built to serve mining operations located high up on the mountain. Caboose is PFM, coach LaBelle.

BOTTOM: Decker Packing Co. was scratch built from Faller embossed sheets and stripwood, is to have its own feeding pens in the open area.



THE Kilt & Pipe Railroad Company occupies some 522 ft. by 1044 scale ft. in the sometime mountain, sometime hill country just west of the Colorado Rockies. In contrast to popular belief, the world of Ian McIntyre and all the inhabitants of Anderson Sidings is FLAT . . . and should they walk to the edge they would fall off. That they will never happen, as they seem quite busy with every day activities and such.

Perhaps it would be wise to start at the beginning. Some while back I had a spare Revell building—the one from the diesel fuel stop. It would look great, I thought, with a loading platform, and it did. Then I said why not an oil storage tank or two to offset the new structure's size. After some hours of bending, twisting, and the like, the Jenning Oil Company was founded.

I could not find, at first, on my layout an area where this new impressive industry would fit, so one night I undid two years' work to build a new bigger and better Kilt & Pipe Railroad.

The engineering group which I headed thought at the El girder construction technique would be best for our 1927 world, and it went up in one night.

Code 70 rail featuring home built turnouts, section control with Poor Man's Transistor Control, plus a surefire switch machine activator were combined to give all the effects wanted in the control area. Code 40 and 50 rail was used in some parts of the layout.

While progress has been slow—if you look fast you'll see quite a bit of detail which I covered before I went to the next logical step. There are tiny weeds placed about, rock groupings, pine trees, even flour dust in the roadbed next to the Superior Baking Company's freight platform.

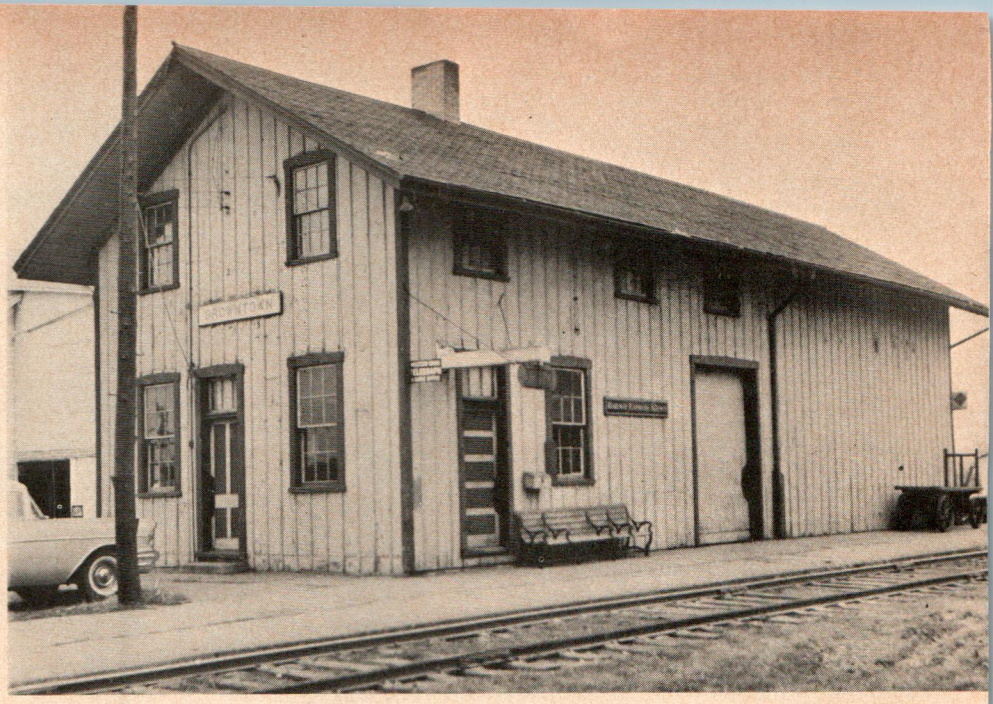
My track plan is yet to be drawn although I have a general idea of what it should look like near completion.

The main basic concept is a try at keping the railroad as part of the overall scene, rather than the one that dominates. And some day there will be tall granite hills setting off the Standard Gauge's climb to the Purple Coal Company shaft. There is always something to do.

Browntown Depot

by Paul E. Larson

A fine country station for the end of a branch on the Chicago Missouri River & Pacific RR.



ABOVE: Prototype for the author's model is this elementary frame structure on the Milwaukee Road. Note surrounding details essential to the model. The prototype is painted gray with maroon trim.

RIGHT: Paul's model built in quarter inch scale has slight modifications from the prototype. Final small details will be added when structure is put permanently in place on railroad.

THE Milwaukee Road's modest frame depot at Browntown, Wisconsin, is not likely to move poets to write lyrical verse about a "temple of transportation," but it does represent a particular style of country station design used by various railroads all across the nation.

I came across this depot in 1954, when Russ Porter and I were Chevying along Highway 11 in pursuit of a Ten-Wheeler and a mixed train. Browntown is a village in southwestern Wisconsin, about halfway out on the Mineral Point branch. A milk condensery and a feed mill are the major commercial ventures in the village. The depot, probably built in the 1880's, was designed with living quarters on the second floor for the benefit of the operator and his family —a common practice in those days when the remote agencies were a real hardship.

This depot has a simplicity that is classic.

My friend Harold Schupp of Kansas City studied my completed model for a long while before he offered the comment; *"There,"* he said quietly, "is a real homely depot." I was highly complimented, for this is exactly the kind of depot I wanted for the end of a branch on the Chicago, Missouri River & Pacific. On the CMR&P, Browntown is a small village, with only a few granger country businesses and a small interchange with the CMStP&P. Very often, the finest railroad structures (from the modeler's point of view) are the "homely" ones that typify a way of life or symbolize an era. In creating the drama of rail roading in our basements, we must select the best "actors" that portray the proper railroad mood.

Thus, we have the Browntown depot, the simplest of structures—yet one that has all the basic lessons of scratchbuilding. I thing it is important for each of us who are seasoned modelbuilders to remember that not every hobbyist has great depth of experience in scratchbuilding, and that we all have to start somewhere in this sort of thing. If you've never scratchbuilt a depot, Browntown is a dandy first effort.

Begin by selecting materials. I have built this type of structure using Strathmore and styrene, but wood remains my favorite, even at the expense of being called a stuffy traditionalist by my friends. I like the way wood takes paint, and the ease with which it can be worked. I used Northeastern's board-and-batten siding (for some reason called "capstrip siding" by that firm) for the basic walls. As we go along, you'll note that basic dimensions are in prototype feet and inches, for the convenience of modelers in all scales. My own model is, of course, ¼" scale, but I will make suggestions on various dimensions and thicknesses whereever appropriate.

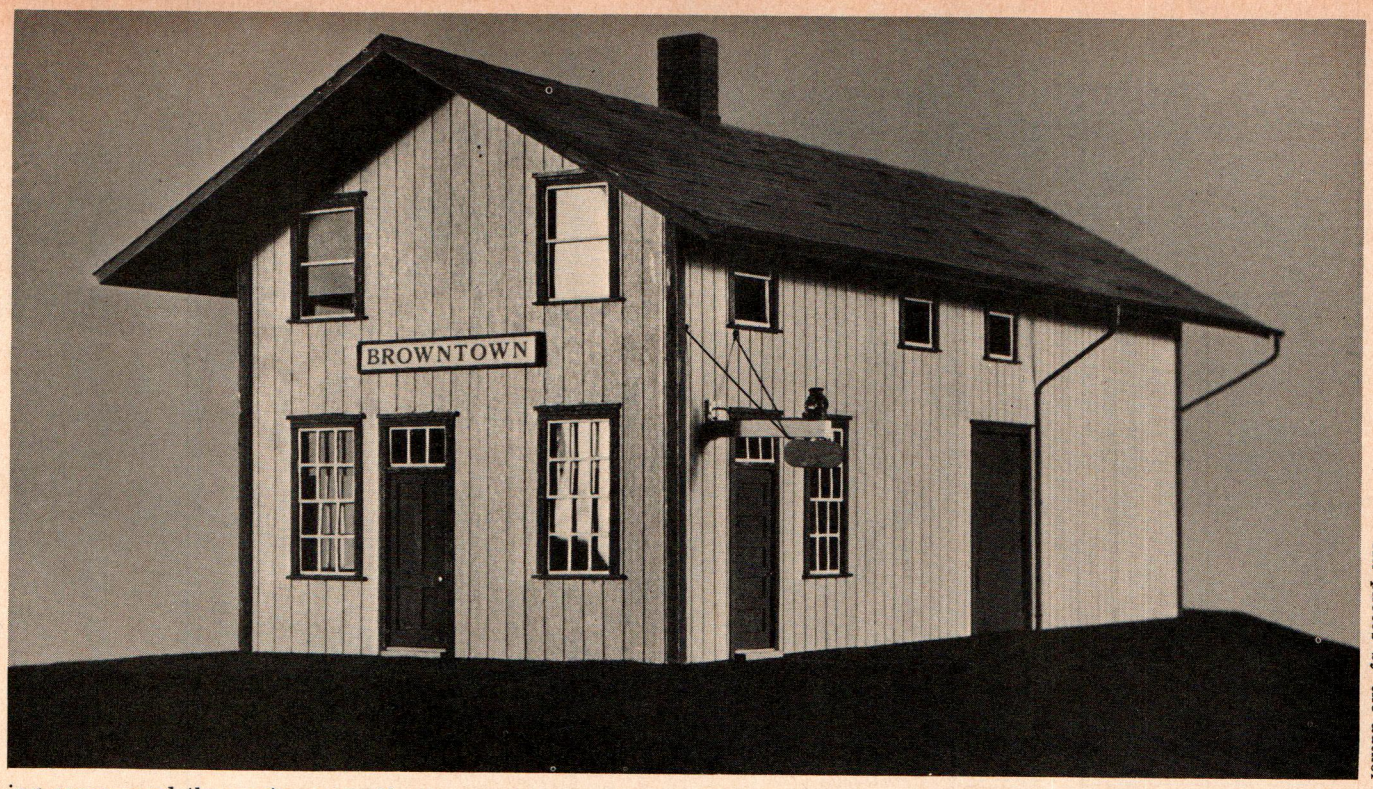
The prototype has siding with 12" batten spacings. This means, as a starting reality that in O gauge, Northeastern's siding with 3/16" spacings is closest and in HO, the ⅛" type is best. In either case, the material is 1/16" thick. The battens run with the length of the 24" long Northeastern sheets. Thus, several panels must be cut and butted together to form each wall. This is not at all difficult because the joints are made completely invisible by joining panels at the edge of a batten.

Construction begins by laying out the various panels. Use basic dimensions in Fig. 1 and Fig. 2. I do this type of layout on the back of the siding sheets, using a 4H pencil and a steel rule or a combination square. A scale rule is, naturally, a must in doing good modeling of this sort, and the combination square helps in keeping the panel edges, window openings and door openings as accurate as possible. I use a single-edge razor blade for actual cutting because it is thin and does not "wedge" the material as much as a modeler's knife. A modeler's knife is helpful in final trimming of window and door openings, however. Use the steel rule as a guide when cutting.

Layout on the back of the siding sheets does require that you not become confused by what is "left" and what is "right," but pencil marks on exposed surfaces are usually difficult to conceal when the model is painted —particularly with a light color like that used by the CMR&P.

When all wall panels have been cut out (incidentally, it's easiest to cut out window and door openings *before* the varous panels are cut apart from the basic sheets), butt them together in proper order for each wall, batten side up on a flat surface, and check the fit at each joint. Gentle sanding at each joint will make the butt fit all but invisible. See Fig. 3.

The next step is to assemble each wall into a continuous unit. Take the component panels for a wall and put them in proper order on a smooth flat surface, batten side *down*, and cement stringer strips along the top and bottom edges. See Fig. 4. Take extreme care in this phase of construction. Use a steel rule to ensure that the panels are joined together in an absolutely straight manner. Back up each panel butt joint with a strip cut from scrap sheetwood, but be sure to avoid using too much cement. Excess cement at this point is likely to squeeze through the butt joint, and cause the exposed wood surface to take paint differently than surround-



All photos by the author

ing areas—and thus ruin your efforts to conceal the joint!

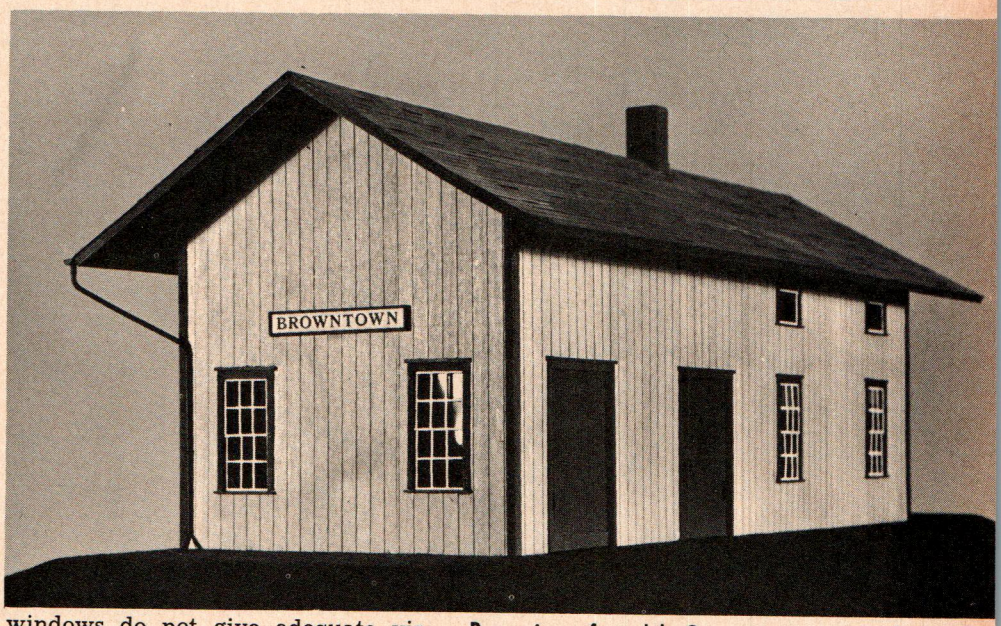
A word about the size of the wood strip used inside this structure—or any model structure—is, I think, very important. I have seen grown men cry and many fine modelbuilding efforts go to pieces because structures were not built with adequate interior bracing. In HO, where ever possible, I always use ⅛" sq. bracing, and in O, 3/16" or ¼" is best. Of course, certain kinds of structures have high interior visibility ,and heavy bracing eliminates opportunities for interior detail. In such instances, I usually back up exterior wall panels with interior panels, cut with the grain at right angles to the outside surfaces. And even then, I sneak in a bit of strong bracing.

I should add that anyone who subscribes to the old "shirt cardboard" theory of structure building might as well leave the room. He'll get no sympathy from me when his prized whatzit curls up into a tulip.

Now erect the walls and join them at the corners with cement. Use a square to make certain that the building *is* square.

When the corner joints have set, add cross bracing at two or three points, and put in a false floor of reasonably heavy sheetwood. Material ⅛" or 3/16" thick is about right. A wall of the same material can separate the baggage room from the waiting room, and prevent that empty look that has ruined so many good models. A second floor in the living quarters end is also appropriate.

If you're really gung ho on interior detailing, you will, of course, change the bracing, flooring and wall installation. I chose not to use interior detail in this depot because the few windows do not give adequate visibility for the effort involved. Instead, I painted the interior an all-concealing flat black.

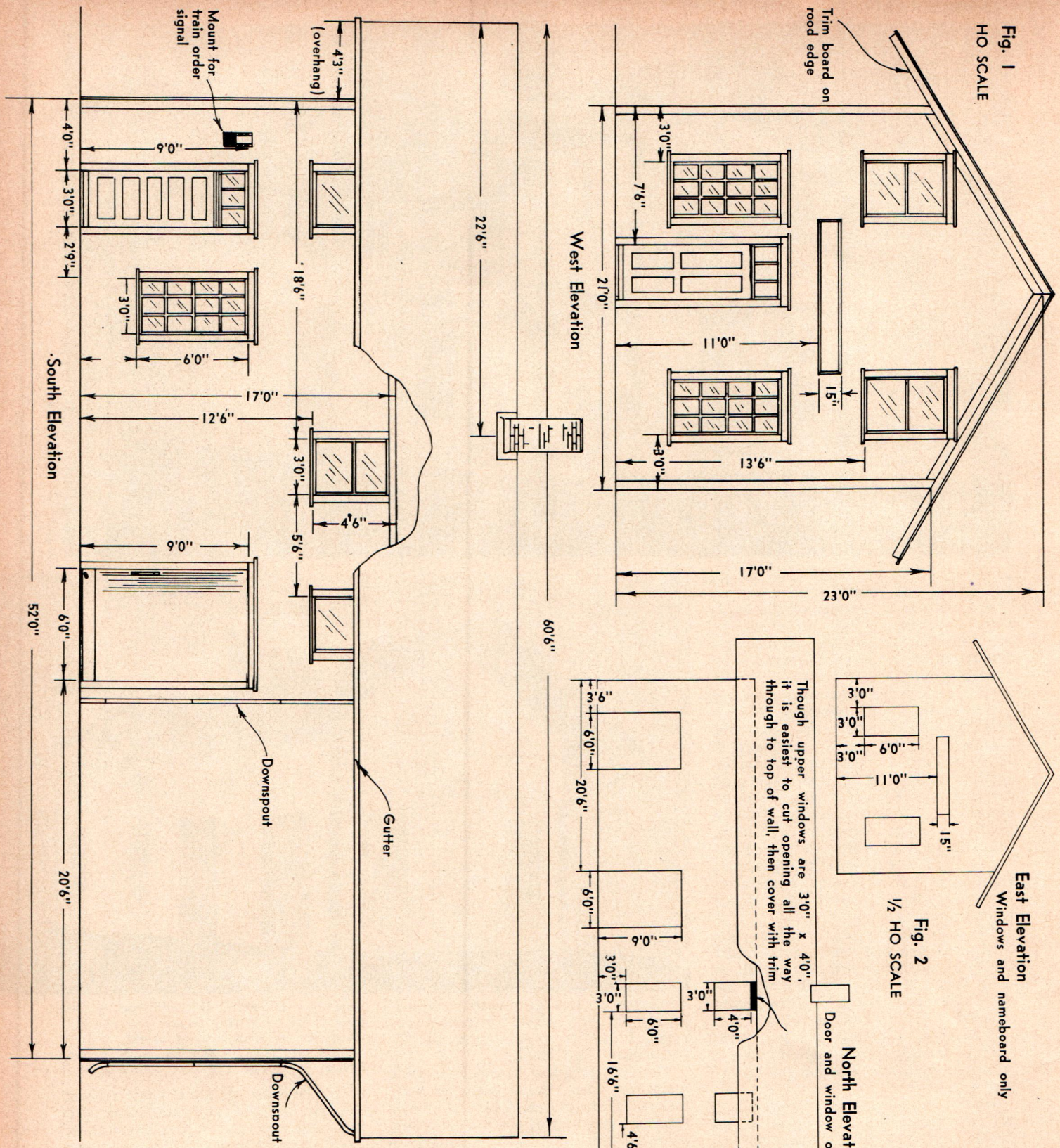


Rear view of model. On prototype, ground level drops off slightly at rear and baggage doors are at truck loading height, a good feature that helps escape the "world is flat" hazard.

The next step is to paint the outside walls the basic color used on your railroad's structures. That is, this is the next step if you use a contrasting color for the trim. The technique is simplicity itself: Paint the walls the basic color, then prepaint the stripwood to be used for the trim boards. On the CMR&P, I used an impossible combination of reefer yellow and buff that comes close to that remarkable hue the Santa Fe once liked well enough to use all the way from Chicago to Azusa. The trim is coach green.

Now for the trim. The prototype has trim boards that range between 4" and 6" widths. They vary, I presume, because at some point during construction, the carpenters exhausted the supply of one or the other sizes. I settled on using 6" trim boards along the basic edges—corners, under eaves, and at a later point in construction, on the roof edges. And around windows and doors, I chose to use 4½" wide material. In O gauge, then, I used 1/32"x⅛" and 1/32"x3/32" trim boards. In HO, to get the contrast in sizes, it might be appropriate to use 3/32" and 1/16" widths. In any case, Fig. 5 has the door and window details.

The window sash is a different matter. I suppose, if a man were really



Wood bracing strips cemented to smooth backside of panels to "tie them together" into a wall unit (window and door openings not shown)

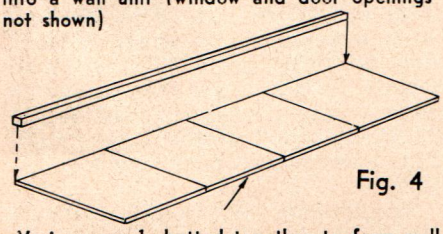
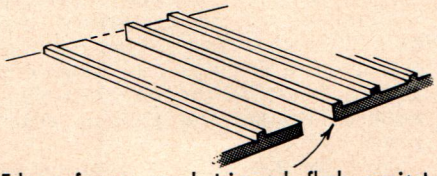


Fig. 4

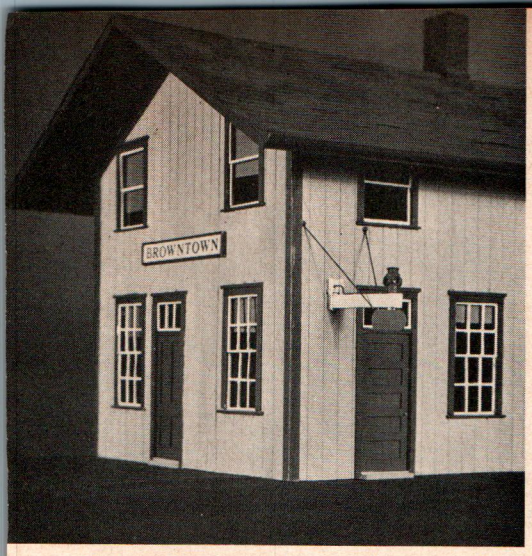
Various panels butted together to form wall.

Fig. 3

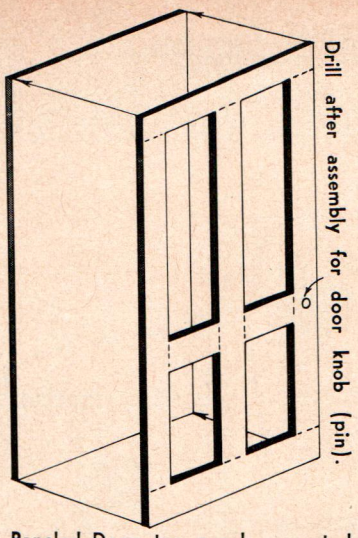


Edge of one panel trimmed flush against batten, so that battenless edge of other panel can be butted against it.

bright, he'd dispense with all this trim jazz and use commercial window frames of plastic or metal that include sash. I do this, myself, every now and then, but on the Browntown depot I prepainted 1/32" sq. strips white, and then, piece by piece, cemented — using tweezers — the sash components together in each window

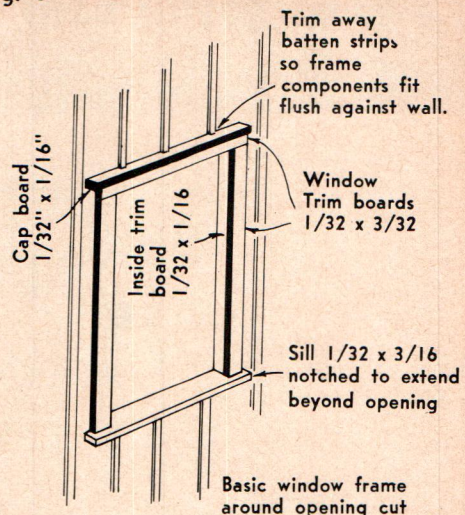


Train order signal was modeled using Kemtron hollow marker light and grain-of-wheat bulb. Wires are concealed in hollow bracket. Roundels in light were punched from colored plastic using a piece of tubing for a punch.



Paneled Door: two panels cemented together —one solid, the other with cutouts. Instead of cutouts, strips may also be used as per dotted lines.

Fig. 5



Basic window frame around opening cut in wall material. Same technique used around doors.

frame. This is a task that is a test of patience and fortitude. However, *I did it,* but perhaps next time if I can use a commercial casting I'll choose *that* route. Good sense in scratchbuilding —especially when you're building an entire railroad—usually means that you fabricate what you can't buy and really want or need. Anyway, that's the scoop on the sash. Do it any way you please.

Once the trim and sash have been completely installed, it's a good idea to touch up the paint on these various parts with a small brush.

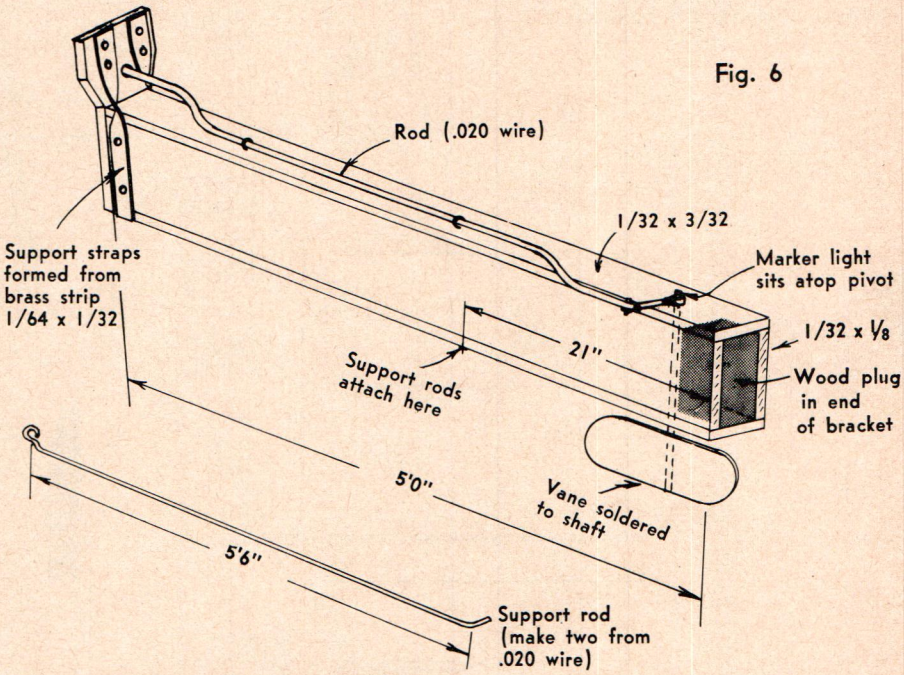
Now for the train order signal. The depot is outfitted with a very simple type—a blade or paddle on a pivot, operated from inside by a rod arrangement. A top the pivot is a switch stand lamp, with two red and two green roundels. Fig. 6 shows construction details. The signal could be made to operate with a system of cranks and levers, but on my model I decided to leave the signal in a fixed position; the lamp is illuminated, however.

The gutter arrangement on this structure is a bit unusual. The north edge of the roof has no gutter, and the gutter on the south edge (over the platform, has two downspouts, one at the center, and one at the end. The center downspout goes down into the platform where it is connected to a drain tile.

I formed the gutter, in scale 8' and 10' lengths, of .005" soft copper sheet, cut into strips wide enough to provide a mounting flange. The technique is shown in Fig. 7. A forming tool cut from 1/8" thick wood is used to form the copper over a half-moon wood strip (itself formed from two lengths of Northeastern Quarter-round cemented to a wood base).

The wood standard is painted flat white, the metalwork black, and the paddle bright red. The wires from the lamp extend through the bracket and down through a small hole in the waiting room floor.

Fig. 6



The roof is the last major step in construction. It consists of 1/16" thick smooth sheetwood, cemented on peaked false walls of heavier material. I used some scraps of 3/16" thick balsa for these support bulkheads.

To simulate the boards on the under of the eaves, I paneled these "overhang" areas with scribed sheetwood (3/32" spacings in 0, 1/16" in HO). The underside of the eaves are painted the same color as the trim.

I cut shingles in long strips, from single-ply strathmore, and laid them on the roof, strip after strip. Commercial roofing materials are adequate, but they do tend to be too uniform.

The chimney—which is hollow—is built up from sheetwood and covered with Holgate & Reynolds simulated brick. The nameboards are the last detail. Mine were cut from 1/32" thick sheetwood, framed with 1/32" and 1/16" strips. The same technique can be used in HO with two-ply Strathmore and 1/32" sq. strips. The panel is white, the frame black.

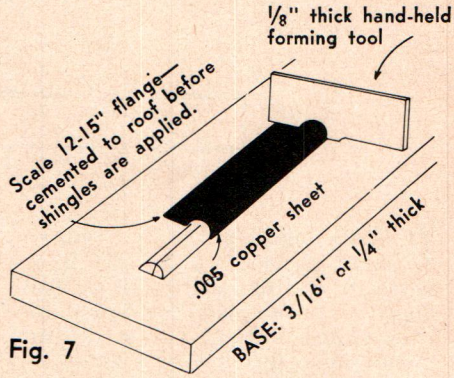
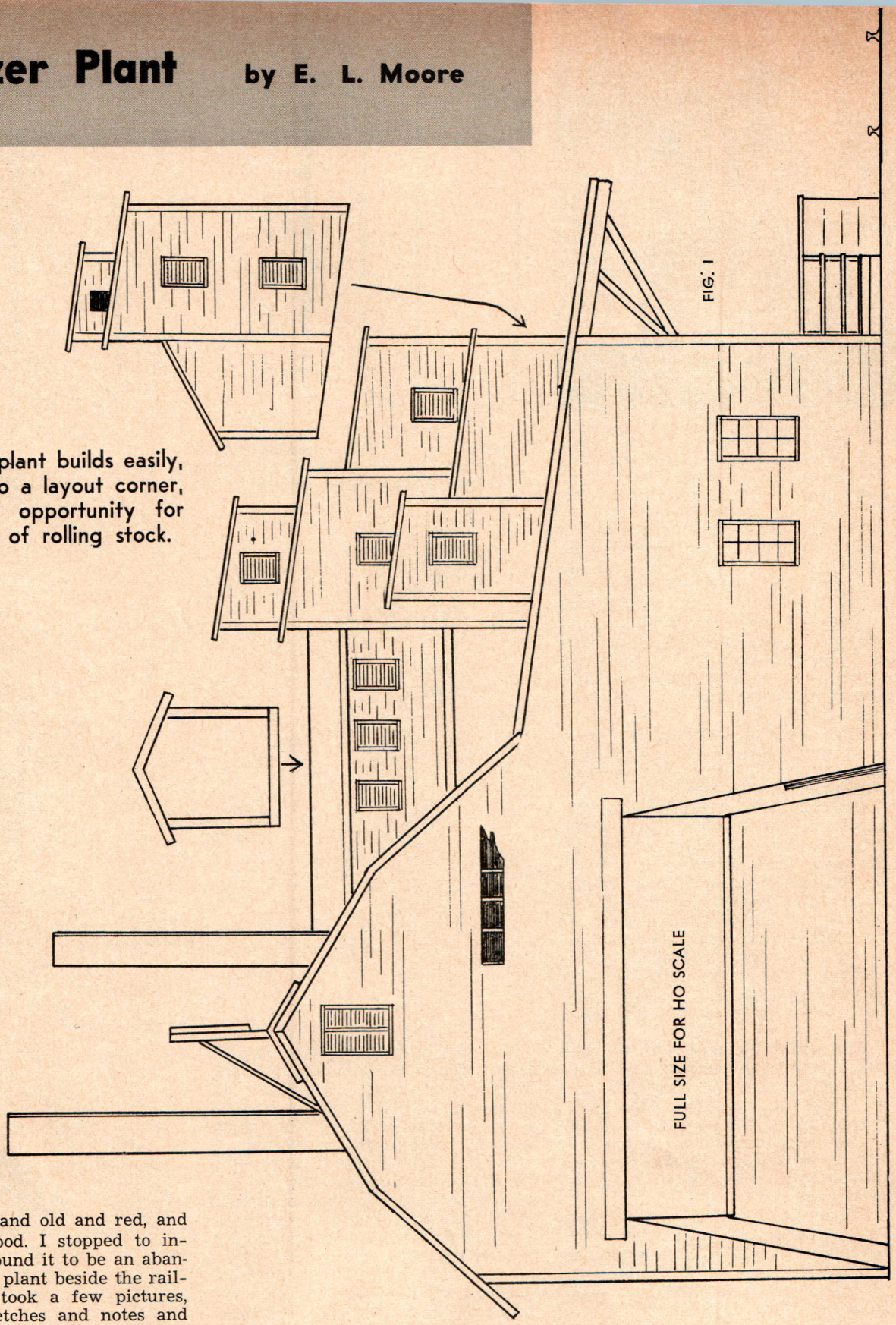


Fig. 7

And that's about it. Until, of course, the depot is put in permanent position alongside the railroad. At that time, final touches like telephone, telegraph and power lines, and suitable brackets, insulators and conduits, should be installed.

Fertilizer Plant

by E. L. Moore



This fertilizer plant builds easily, fits snugly into a layout corner, and provides opportunity for diverse types of rolling stock.

IT WAS huge and old and red, and built of wood. I stopped to investigate and found it to be an abandoned fertilizer plant beside the railroad siding. I took a few pictures, made some sketches and notes and went my way. A month later, thinking a few additional pictures might be helpful, I made another trip out—but like Thurber's little man upon a stair, this time it wasn't there. And I, too, wished it hadn't gone away. For half a century it stood strong and firmly rooted, then in a day bulldozers came and left a pile of match sticks.

In earlier years phosphate rock was shipped to the plant from Florida, and treated with sulphuric acid in huge lead vats—in later years already treated acid phosphate was shipped in, mixed with nitrogen, cottonseed meal and other ingredients, then screened, cured and bagged. At one time fish were shipped in by the carload. Needless to say it became pretty ripe enroute. In fact, the smell was such that trains with such cargo were obliged to stop at the city limits and get permission to proceed through the city to the farther outskirts where the plant operated. Sand, too, was used in quantity, to give weight and filling to the fertilizer. Instead of a

water tank, on a nearby knoll a little higher than plant level there was built a reservoir of brick and concrete.

While my plant will do well to accomodate a couple of cars on the single siding, the prototype could and probably did have as many as a dozen cars occupying its double track siding at one time; but then it had a platform fully two hundred feet long. I was forced to make a drastic cut in size to enable my plant to fit the average pike and RMC's pages. As it is, the space occupied (in HO) is 7½"x10".

Here, too, in HO, is a bill of materials:

21"	1/16"x3½"	Northeastern siding, 1/16" spacing
42"	1/16"x4"	sheetwood (reinforcement and roofing)
8"	1/8"x4"	sheetwood inner wall and misc.)
6"	1/32"x4"	sheetwood platform and misc.)
3"	1/4"x4"	dowel and 3/16" dowel

Small amount of stripwood.

First off, let's get the size and some of the general characteristics of the structure in mind. The width is 47' and the length 70' including the 10' shed at one end. It has a gambrel type roof and a shed type roof and is a modeler's delight in one respect —only three windows—about 20 louvres though, but they're not difficult.

So—to begin; cut two ends as outlined in Figure -, 46' long (corner posts, when added will make width 47'). Both ends are identical in outline but the far end has no window openings, only a single louvre opening. Since both ends will require piecing I reinforced them by cementing 1/16" balsa to the inside, the grain at right angles to the siding. To further strengthen the structure I cut out a center wall of identical dimensions, from ⅛" wood. The louvre openings are 2½'x3½', and the window openings 2¼'x4', purposely small in order to accentuate the size of the structure.

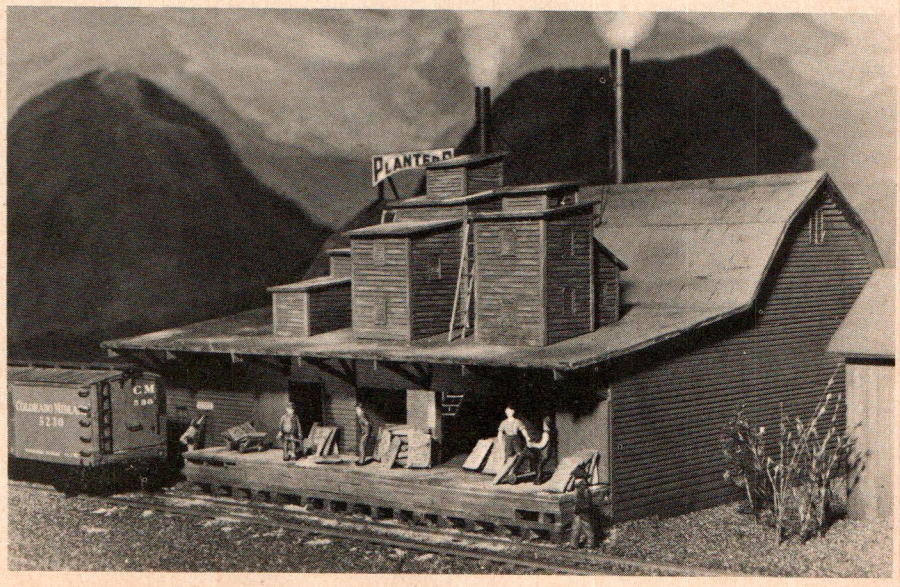
The rear wall is 20½' high by 59' long, without any openings. The front wall is 15'x59,' with a 5'x7' door opening and another 7'x25' opening as well as the small office window and door.

The structure can be assembled now, the dotted line in the middle in Figure 2 showing where the ⅛" wood center partition goes. Since there is no floor it might be well to brace the corners so as to make sure the structure is squared up. At this point comes the paint. I used one brushful of yellow to five of boxcar red, and an equal amount of thinner. If this seems too drab for you, add five parts of caboose red.

I used prepainted green 1/32"x1/16" stripwood to case the windows. The louvres in each end were made of narrow spaced sheathing (.025) 1/16" thick, with .020x1/16" stripwood sides.

ABOVE: Fertilizer plant siding is just off the main tracks, with the stock auction barn close by. Automation has not yet reared its head and steam is still supreme. Old cars by Central Vy.

BELOW: The fertilizer plant from the east end. Ladders are safety precaution in case of fire. Notice-spilled fertilizer on ground and around platform. Wood roof is covered with tissue paper.



Fertilizer plant from the west end reveals the oddly shaped pump house and the office located in the corner. Bumper was fashioned from old railroad ties. Sign is up to modeler.

At the front I inserted 2-1' square posts (⅛" sq.) in the 7'x25' opening, and built 2 sliding doors. While there was no pretense of detailing the interior it was necessary to build an inside platform about 10' wide. Also, underneath each of the two larger elevators I placed 6' square shafts, and beside one steps are shown leading upward.

I went to a great deal of trouble building my platform as per prototype (see Figure 3) then found it too distracting and covered it with boards. So you can shortcut here with any old platform just so that it is 4' high and 7' wide. Better, however, not to attach it until we've added the shed roof and done the under roof bracing. Weather it, though, varying shades of gray, using stains.

Now to the roofing, doing the shed roof portion first. The sloping shed roof is 28'x62½' of 1/16" wood, and extends out over the platform 8'. The prototype roof had the appearance of one large sheet of tarred paper with almost invisible seams. I stretched out a piece of toilet tissue larger than the shed roof. Using white glue, I spread a quarter inch wide coat all around the top edges of the roof (none is needed in the middle) then lay the board on the tissue. Turning it over a little smoothing is necessary. Now trim with scissors or very sharp razor blade, leaving a quarter inch margin of tissue. Run cement along edges now, also under eaves, turn tissue under and there you are—that simple.

Paint the shade gray you want—I used equal proportions black and white with a touch of yellow. Divisional lines may now be inked in—I use a medium point steel pen, brown ink, and a skipping stroke. The brown ink serves better than black as it is less intense.

Lay the roof upside down now (after cementing it to the structure) and cement on the supporting rafters which are placed about 10' apart. I used 1/32" balsa (about 3x9"s) and then add the supporting braces as shown in Figure 1, of stripwood or balsa. With this out of the way you can cement the platform to the front.

You'll need a couple more pieces of wood 62½' long to fit the slopes of the gambrel roof; one about 18' wide, the other about 20'. By cutting a shallow V groove on the underside where the slope changes angles you can make do with one piece on each side. The ridge and any other places requiring it may be covered with a narrow strip of tissue, then painted.

Now we come to the odd shaped little shed at the end of the structure. From its shape and the fact that roofing covered both top and ends I figured it must be top secret, so I built it just as it was. No amount of explaining could suffice here, so you'll have to refer to Figure 3. Starting with the rear wall, cement it to the main structure, then cement bottom against this, and the front wall next. Add inside braces, then put on the roof and finally the ends. I was later to learn that here was housed the pumping machinery and an ordinary shaped shed would have done as well.

Next, the elevators, those tower-like protruberances which sit on the shed roof. And if you're shuddering at the mere thought of cutting all those tiny openings for louvres in the siding, forget it. It would be a task, I grant you. But I used 1/16" wood here, scribed to stimulate siding, and 1/32" wood for the rooftops. On the prototype the elevators were, I estimated, 25' to 30' high. Obviously, mine couldn't be more than half that, but the small louvres, and the ladders heighten the impression of size. In building the elevators you'll find the front and rear walls of equal height, the slope of the shed roof giving the right slope for the elevator roofs. Good idea, however, to fix the angle of the shed on a sheet of paper, using this when cutting out the sides. Elevators, in prototype use, have a shaft in which an endless conveyor of steel buckets carry fertilizer components to

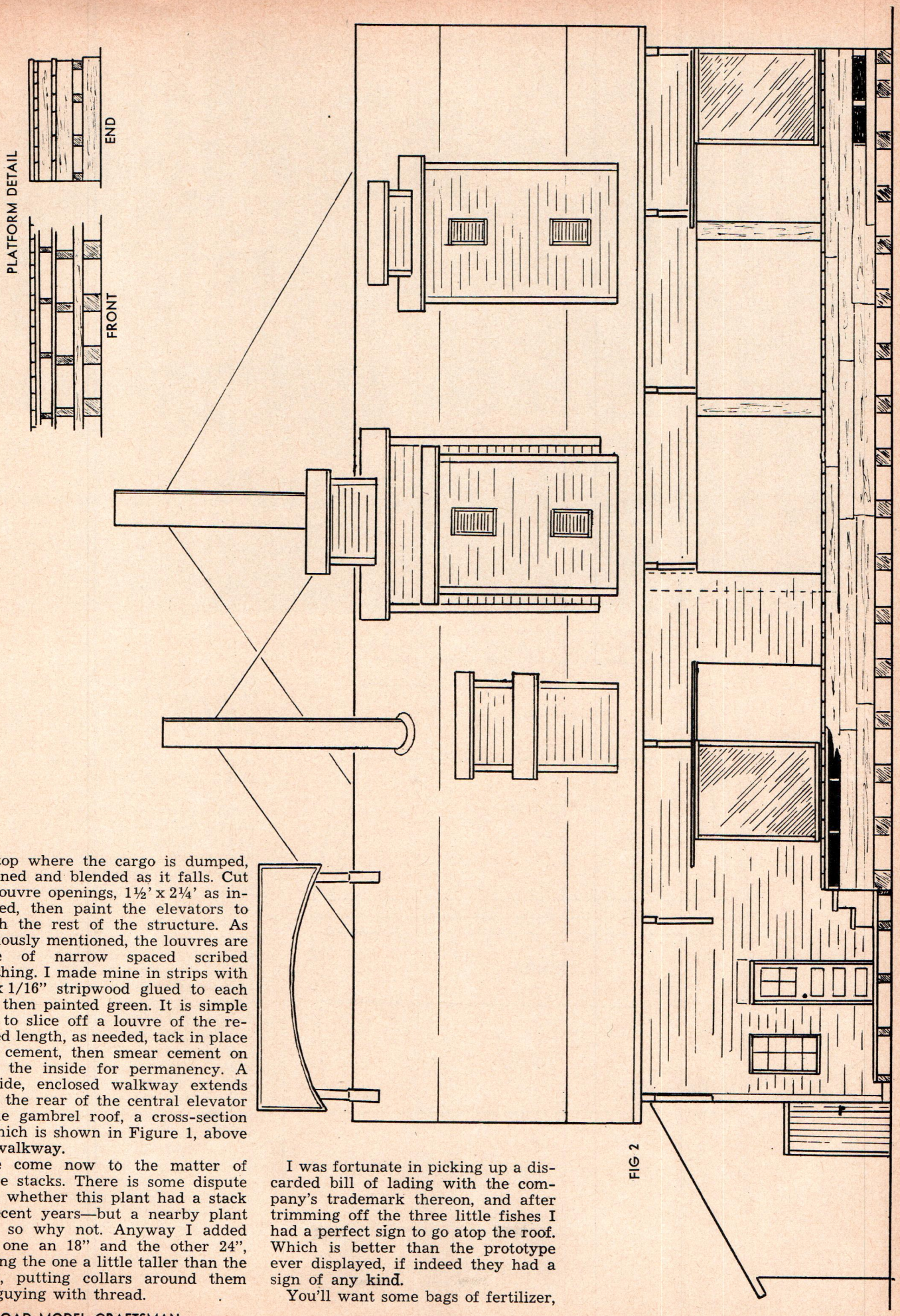


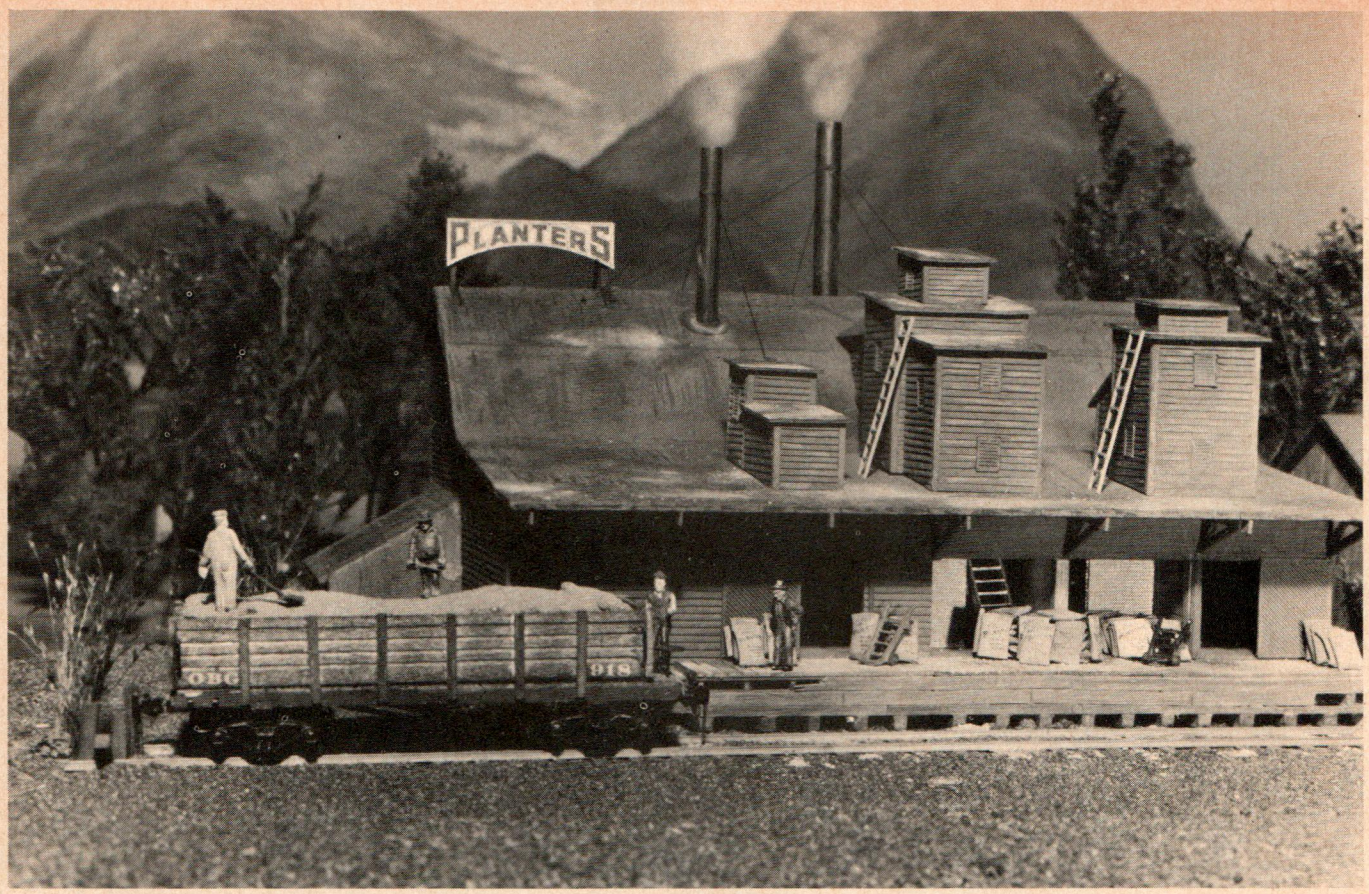
FIG 2

the top where the cargo is dumped, screened and blended as it falls. Cut the louvre openings, 1½' x 2¼' as indicated, then paint the elevators to match the rest of the structure. As previously mentioned, the louvres are made of narrow spaced scribed sheathing. I made mine in strips with .020 x 1/16" stripwood glued to each side, then painted green. It is simple then to slice off a louvre of the required length, as needed, tack in place with cement, then smear cement on from the inside for permanency. A 6' wide, enclosed walkway extends from the rear of the central elevator to the gambrel roof, a cross-section of which is shown in Figure 1, above the walkway.

We come now to the matter of smoke stacks. There is some dispute as to whether this plant had a stack in recent years—but a nearby plant does, so why not. Anyway I added two, one an 18" and the other 24", making the one a little taller than the other, putting collars around them and guying with thread.

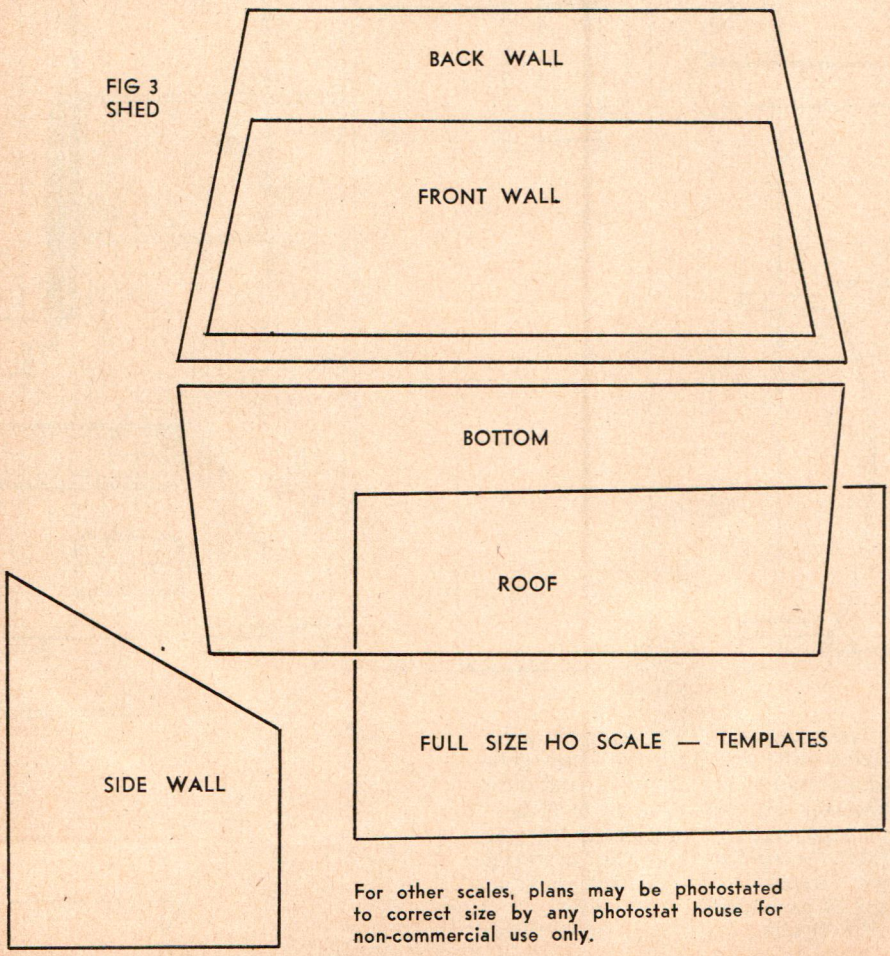
I was fortunate in picking up a discarded bill of lading with the company's trademark thereon, and after trimming off the three little fishes I had a perfect sign to go atop the roof. Which is better than the prototype ever displayed, if indeed they had a sign of any kind.

You'll want some bags of fertilizer,



At one time sand was used as a filler in fertilizers to give needed weight. Interior of author's model is not detailed but does have shaft under elevators and stairway leading upward.

FIG 3
SHED



For other scales, plans may be photostated to correct size by any photostat house for non-commercial use only.

and here's how to make up fifty or so in an hour. Cut a strip of 1/32" balsa 1 scale foot wide and the width of a sheet of toilet tissue. Touch with cement then roll firmly and seal with cement. A little thinned railroad paint, brownish yellow is brushed over this, and then it is cut into 3' lengths. Using a pair of pliers having corrugated jaws, clamp down on each end of the bag, closing it. I used green ink, implanting the trademark and a bit of indecipherable scribbling on a few of the bags, then cemented them in rows or in stacks.

Place a little loose fertilizer on the platform (anything with an off-white or grayish tone will do—talcum powder, flea powder or what have you) and since a fertilizer plant is prone to dust, some on the tip of a dry brush swished about on the siding and even the roof, is in keeping.

Such a plant calls for boxcars, gondolas carrying sand, and chemical tank cars. I recently visited a plant into which ten boxcars were being shunted at one clip. And that takes a pretty good siding.

And just because I seem to have forgotten the office windows and door, there's no reason to leave them unglassed. For a sign to go over the door, look in the yellow pages of your telephone book under "office supplies."

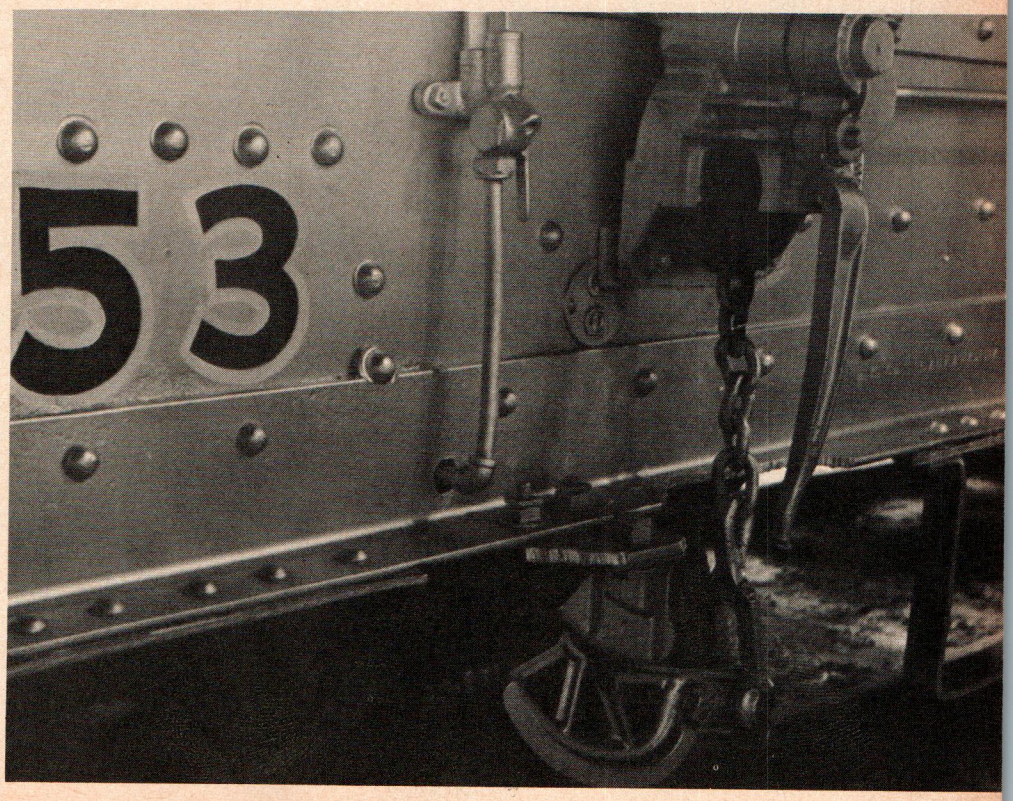
Fertilizer plants of today have no stench about them so you'll not need to import an odor.

Top, old time steam calliope converted to Una-Fon Wagon (electric xylophone) rolls off flat car with aid of team of horses. Wagon is of wood.

CIRCUS FLAT CARS

THE circus car sides depicted on these pages are all authentic reproductions created by the Circus World Museum at Baraboo, Wisconsin, in cooperation with the Joseph C. Schlitz Brewing Company. All of these cars have been recreated on the circus flat car fleet owned by the Circus World Museum, formerly operated by the World of Mirth. The data provided with each car drawing gives the Circus World Number first, followed by the circus name. Also given is the former World of Mirth (WOM) car number, the color scheme of the car, and the car type: Mt. Vernon Car Company or Warren Car Company. Where the same CWM car number is given for two different circuses, the cars are lettered differently on each side. See June 1966 RAILROAD MODEL CRAFTSMAN for additional data and photos.

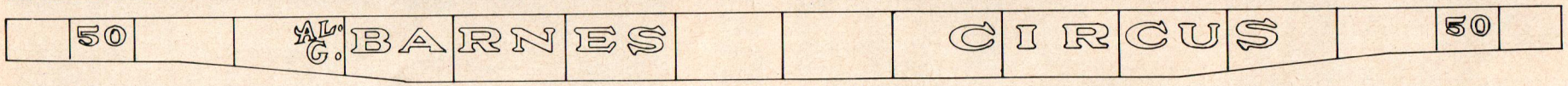
We are indebted to Paul Larson and the Joseph C. Schlitz Brewing Company, of Milwaukee, for the data and photos provided in this circus series.



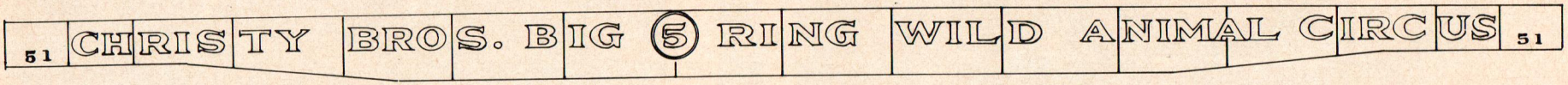
Side end detail on CWM Car 53, formerly World of Mirth 57. Car is painted silver with red letters and white outline, RBB-B&B lettering.

EXPLANATION OF TERMINOLOGY:

BAGGAGE HORSE (Draft or work horse)
BAGGAGE (Any freight or material not otherwise itemized.)
SPEC (The grand entry at beginning of the performance, — NOT a street parade.)
PROPERTY, 'props" or properties (all gear necessary to staging the performance not otherwise itemized.)
SIDE SHOW PANEL WAGON (wagon whose sides unfold to become the pictorial banner-line in front of the side show.)
QUARTER POLES (The tent poles erected between the big center poles, and small side poles to help support the weight of larger tents.)
BLUE SEAT PLANKS (the non-reserved or general admission "back breaker" seat planks, erected at ends of big top, and generally painted blue.)
BIBLE BACKS (the extra wide planks on which reserved seat chairs are set. They are hinged down the middle so as to be folded, like a book, for convenience in handling and loading, thus the nick-name "bible backs.")
STRINGERS (The stair-step risers that support the rows of seat planks.)
JACKS (The supports under the tiers of seats.)

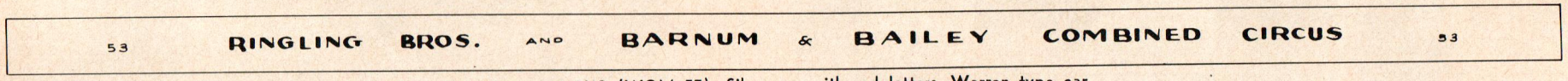


No. 50 AL G. BARNES CIRCUS (World of Mirth No. 61) Orange car with silver letters. Mt. Vernon type car.

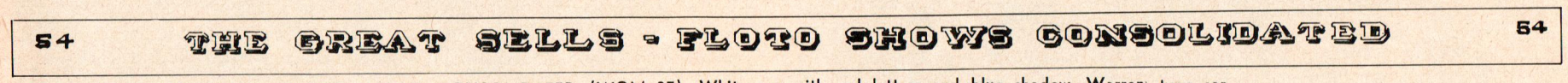


No. 51 CHRISTY BROS. BIG 5 RING WILD ANIMAL CIRCUS (WOM 81). Deep orange car with black letters. Mt. Vernon type car.

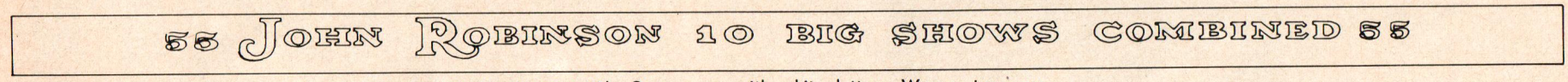
No. 52 GOLLMAR BROS. ENORMOUS NEW SHOWS (WOM 19). Warren type car. Red car with white letters shaded in light and dark green.



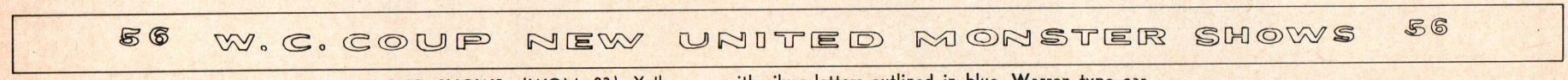
No. 53 RINGLING BROS.-BARNUM & BAILEY COMBINED CIRCUS (WOM 57). Silver car with red letters. Warren type car.



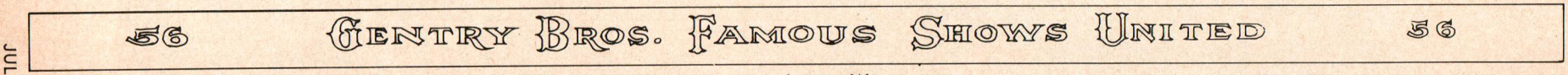
No. 54 THE GREAT SELLS - FLOTO SHOWS CONSOLIDATED (WOM 37). White car with red letters and blue shadow. Warren type car.



No. 55 JOHN ROBINSON 10 BIG SHOWS COMBINED. (WOM 49). Orange car with white letters. Warren type car.



No. 56 W. C. COUP NEW UNITED MONSTER SHOWS. (WOM 23). Yellow car with silver letters outlined in blue. Warren type car.



No. 56 Gentry Bros. Famous Shows United (World of Mirth 23). Yellow car with green letters. Warren type car.

57 101 RANCH REAL WILD WEST 57

No. 57 101 RANCH REAL WILD WEST. (World of Mirth 24). Orange car, purple letters, white outline, inside shadow line to make letter indented into steel. Warren type car.

57 ROBBINS BROS. 3 RING CIRCUS WITH HOOT GIBSON THE SCREEN'S MOST POPULAR WESTERN STAR 57

No. 57 ROBBINS BROS. 3 RING CIRCUS WITH HOOT GIBSON (WOM 24). Orange car with red letters. Shade in? Warren type car.

58 RINGLING BROS. WORLD'S GREATEST SHOWS 58

No. 58 RINGLING BROS. WORLD'S GREATEST SHOWS. (WOM 58). Red car with white letters. Warren type car.

58 THE BURR ROBBINS CONSOLIDATED RAILROAD SHOWS 58

No. 58 THE BURR ROBBINS CONSOLIDATED RAILROAD SHOWS (WOM 58). Red car with silver letters outlined and shadowed in blue? Warren.

59 The GREAT ADAM FOREPAUGH and SELLS BROS. SHOWS UNITED 59

No. 59 THE GREAT ADAM FOREPAUGH & SELLS BROS. SHOWS UNITED. (WOM 66). Silver car with blue letters. Warren type car.

59 BUFFALO BILL'S WILD WEST AND PAWNEE BILL'S GREAT FAR EAST SHOW 59

No. 59 BUFFALO BILL'S WILD WEST & PAWNEE BILL'S GREAT FAR EAST SHOW. Silver car with green letters. (WOM 66). Warren

60 The Barnum & Bailey Greatest Show on Earth 60

No. 60 THE BARNUM AND BAILEY GREATEST SHOW ON EARTH. (WOM 63). Yellow car with red letters. Warren type car.

60 WALTER L. MAIN ALL NEW MONSTER SHOWS 60

No. 60 WALTER L. MAIN ALL NEW MONSTER SHOWS (World of MIRTH 63). Yellow car with blue letters. Warren type car.

61 COLE BROS. WITH CLYDE BEATTY AND KEN MAYNARD 61

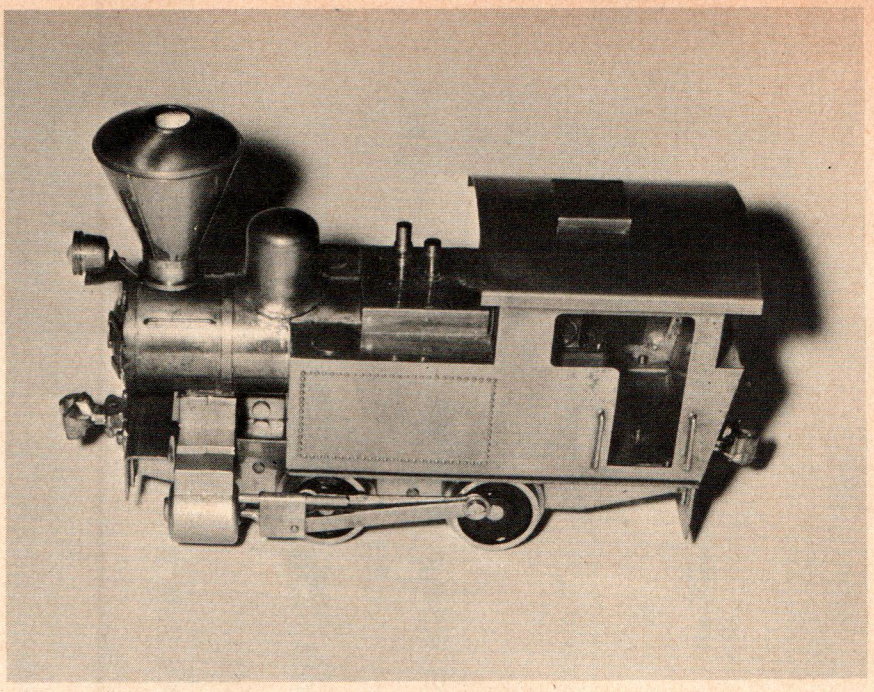
No. 61 COLE BROS. WITH CLYDE BEATTY AND KEN MAYNARD. (WOM 25). Silver car with red letters, shaded in blue-green. Warren type.

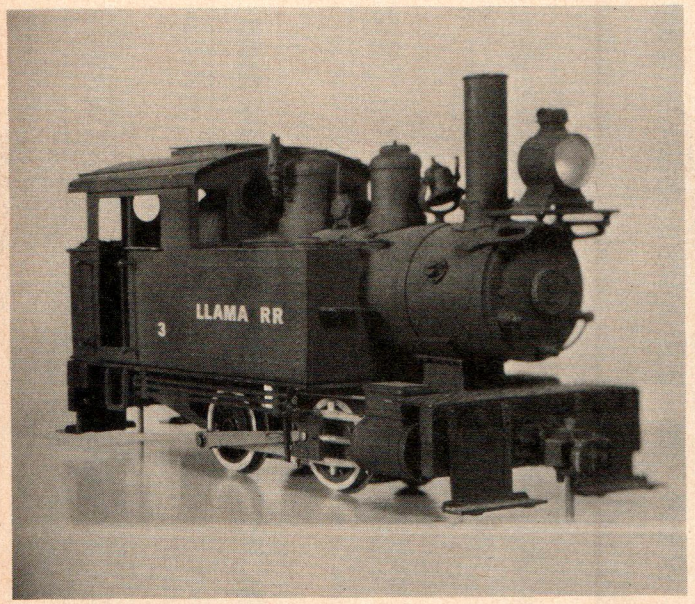
61 SPARKS CIRCUS 61

No. 61 SPARKS CIRCUS (World of Mirth 25). Dark orange car with white letters (plain). Warren type car.

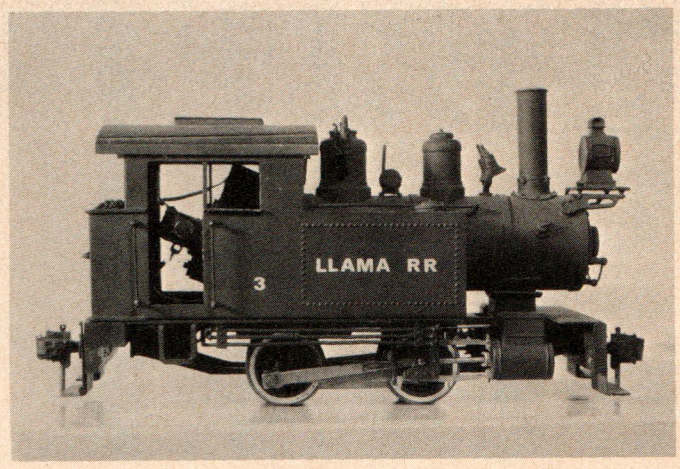
Boomer Trail

The Photos on these two pages were snapped by RMC's itinerant photographer at the Abraham Lincoln Hotel during the recent Mid-Eastern Region Convention, at Reading, Pennsylvania.

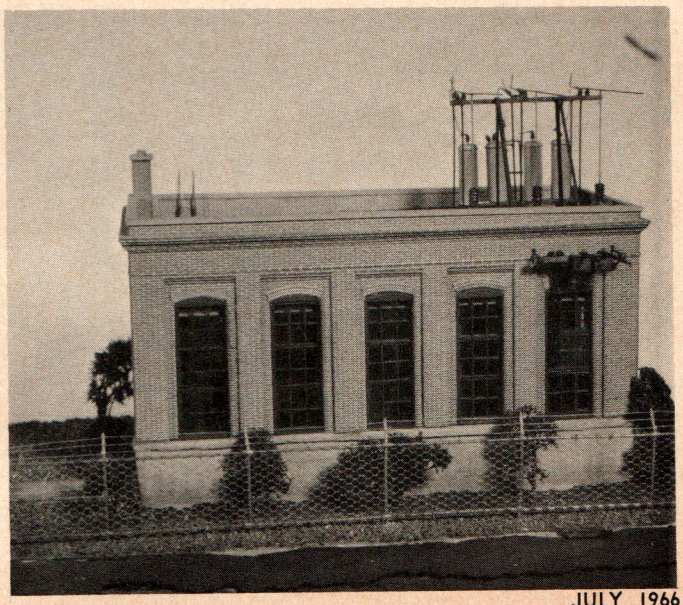


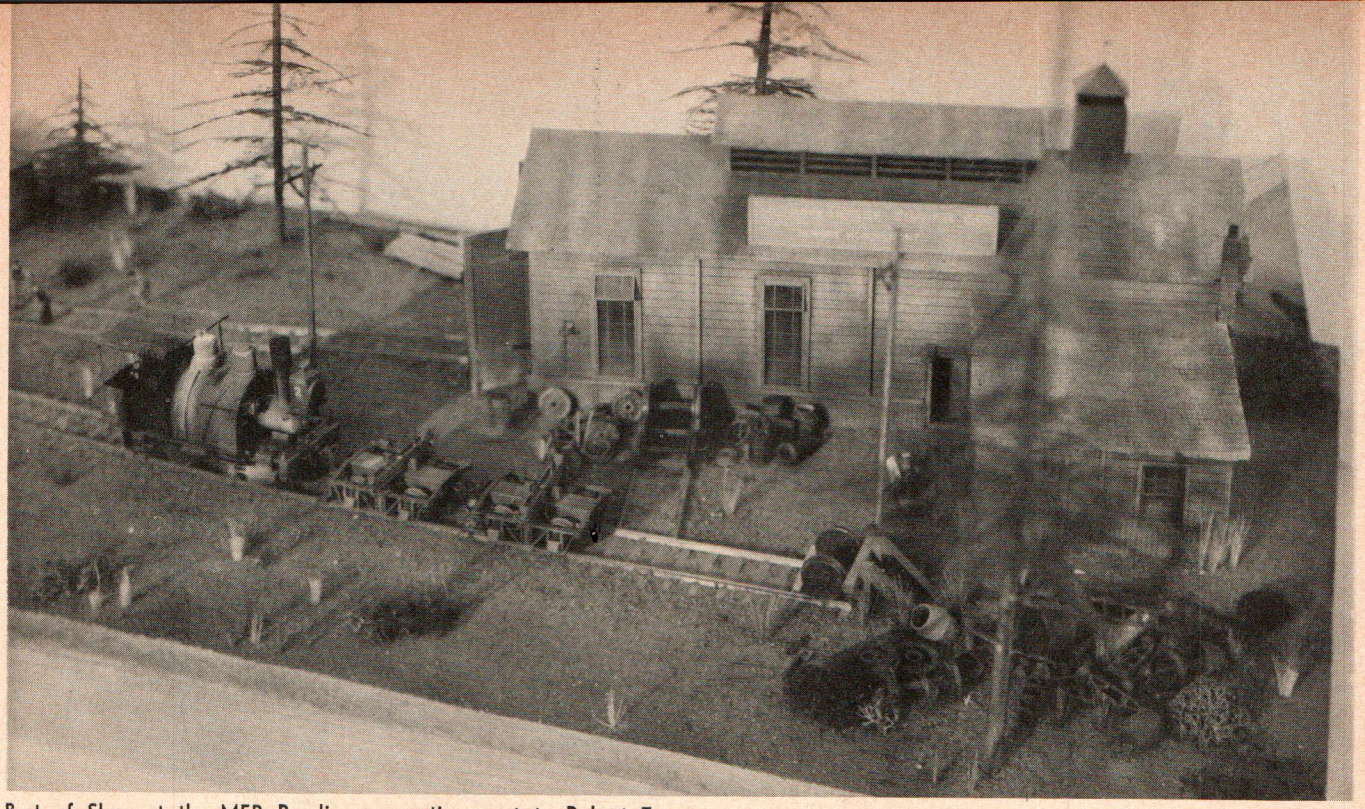


G. William Hammer, MER's 1966 pres, still finds time for model building and pulled down 3rd place in locomotives with this Ken Kidder plantation loco conversion loaded down with Kemtron parts. The photos show both the original model as it looked before conversion started and two views of the completed On3 model. This little switcher would be welcomed on any quarter inch n3 railroad.

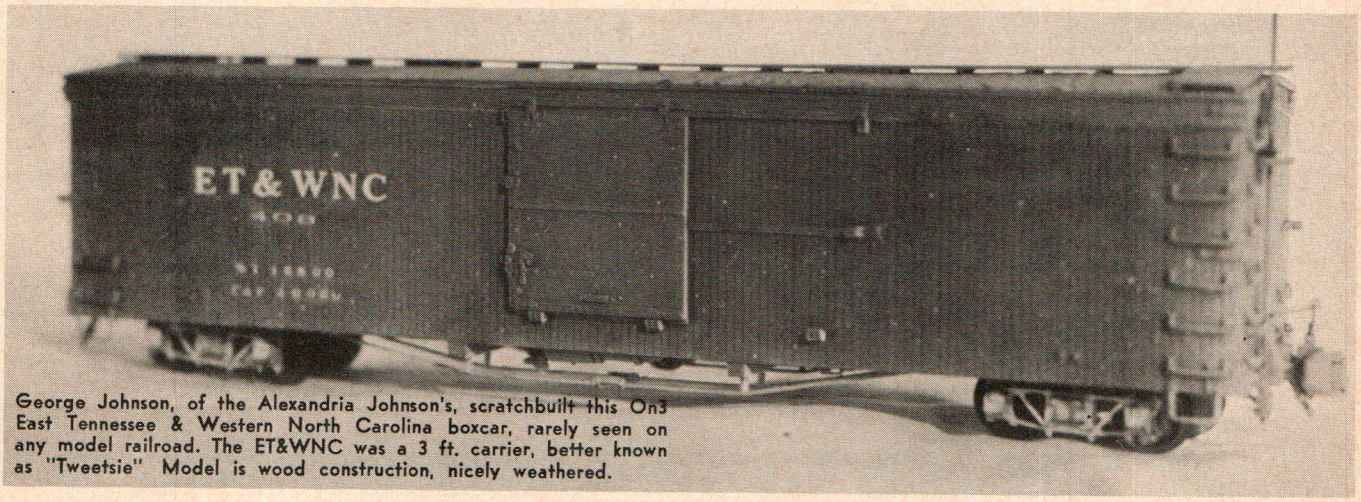


Staten Island's Vince Vasta built this diminutive block of old time buildings from wood and other at-hand materials for his HO layout. A versatile modeler, Vince also constructed the crisply detailed power house, complete with interior lights and sound.

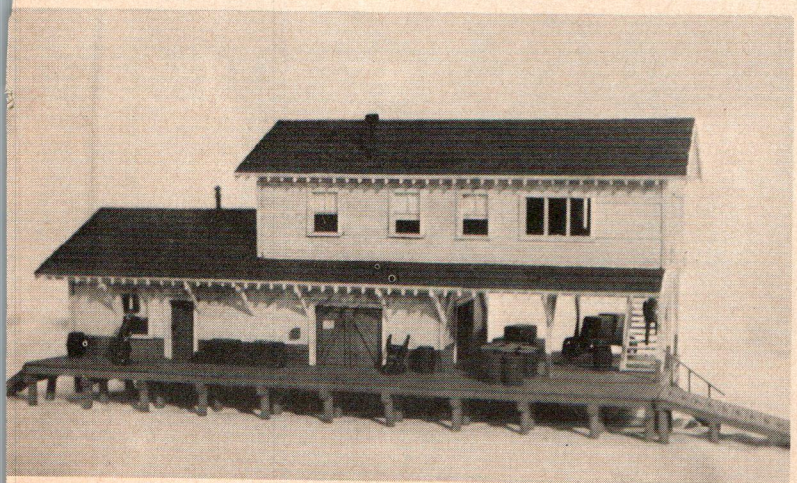


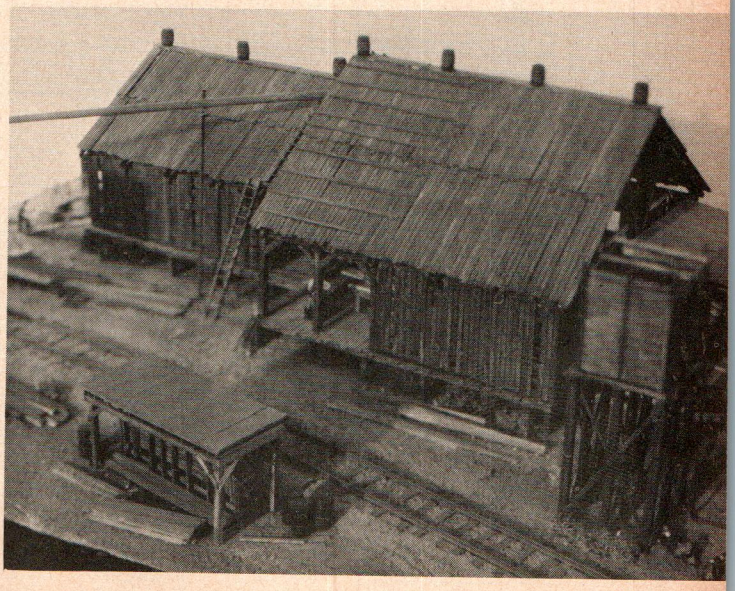


Best of Show at the MER Reading convention went to Robert T. Corriston, Media, Pa., who also walked off with six other awards, to his own amazement but not to the amazement of other modelers who saw his work. Diorama is for his HO Hungry Horse Timber Co.

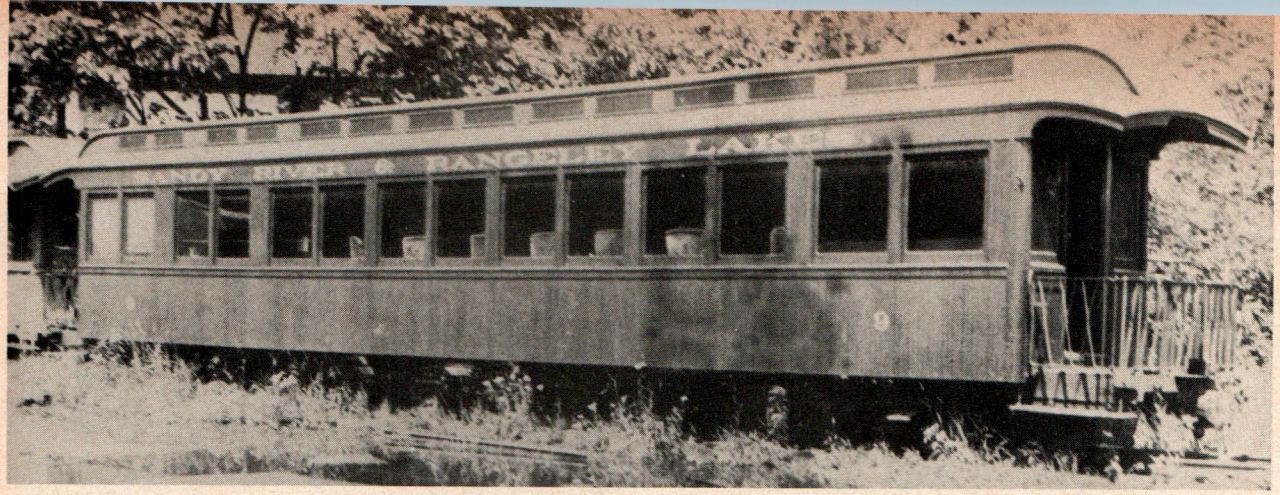


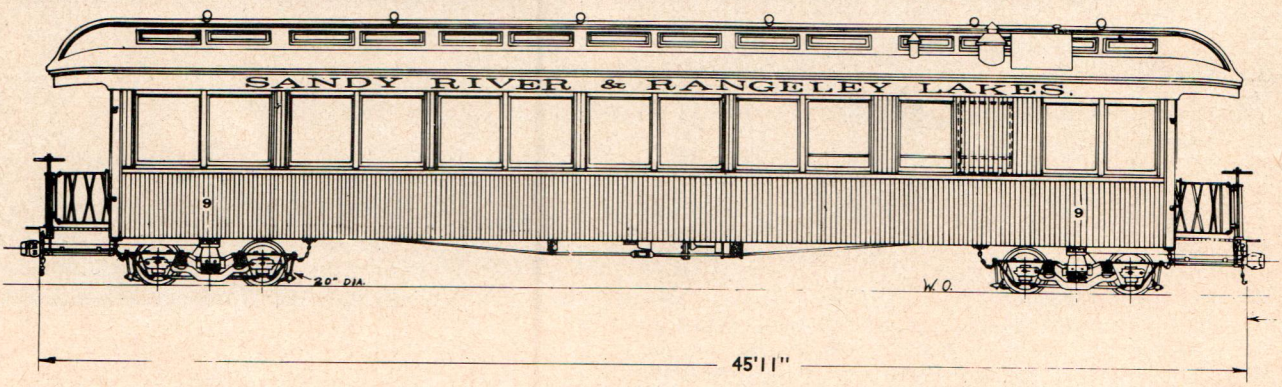
George Johnson, of the Alexandria Johnson's, scratchbuilt this On3 East Tennessee & Western North Carolina boxcar, rarely seen on any model railroad. The ET&WNC was a 3 ft. carrier, better known as "Tweetsie" Model is wood construction, nicely weathered.

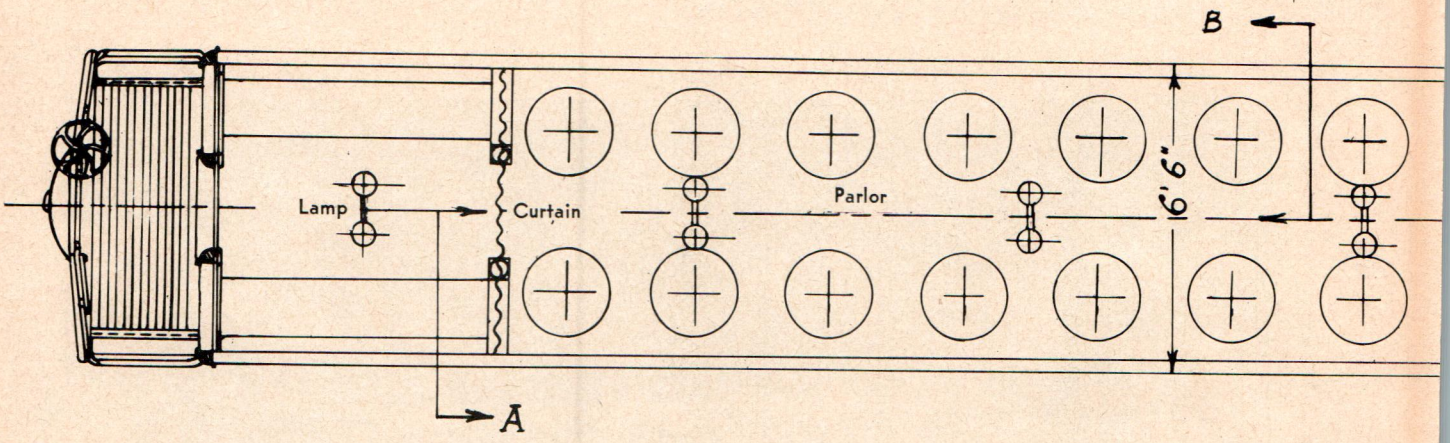


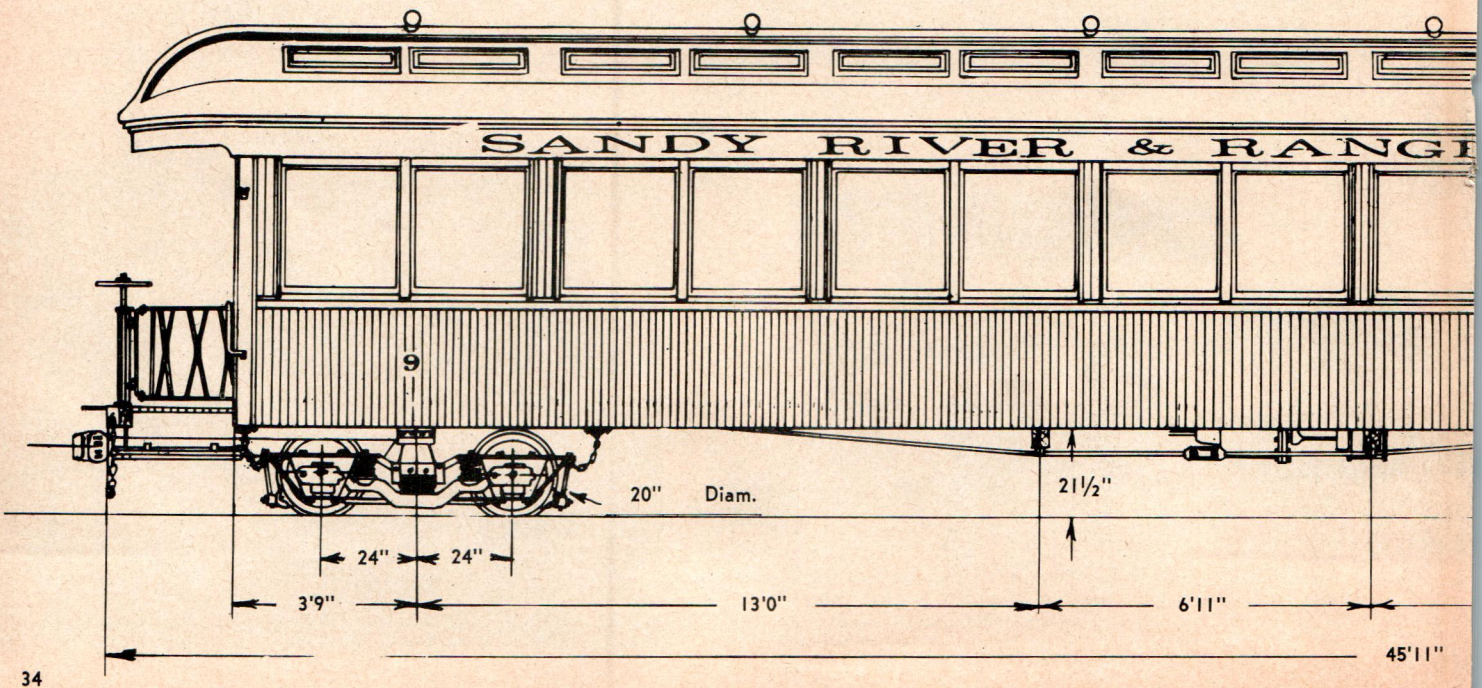


Fred Wadley, of Jersey City, N. J. is another up and coming scratch builder with a feel for putting the right materials and the right detail in the right place, with superb results like the HO sawmill and Florida East Coast freight station shown here.

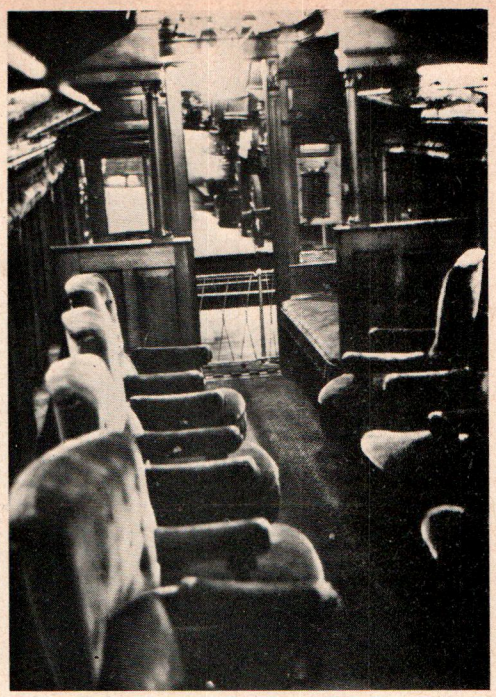

SANDY RIVER & RANGELEY LAKES
9


SANDY RIVER & RANGELEY LAKES.
9
9
20" DIA.
W.O.
45'11"


B
Lamp
Curtain
Parlor
16'6"
A

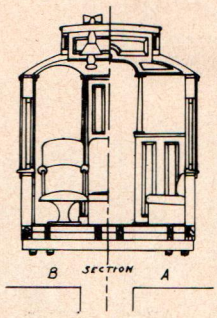

SANDY RIVER & RANGE
9
20" Diam.
21½"
24"
24"
3'9"
13'0"
6'11"
45'11"

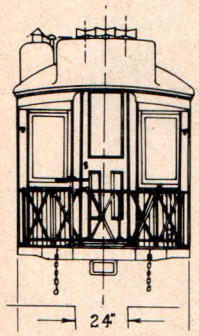
Interior of the Sandy River parlor car as she looks today at Edaville, preserved in all her original glory in the Nelson Blount collection. Photograph from a Kodachrome by John Hartz.



Sandy River & Rangeley Lakes No. 9 as she appeared in the Maine woods back in the days of common carrier two footers. Much Maine equipment has been preserved at Edaville. Collection John Hartz.

The strangely fascinating low slung look of Maine narrow gauge equipment came from their diminutive two foot trucks.





Drawn by Walter Olevsky

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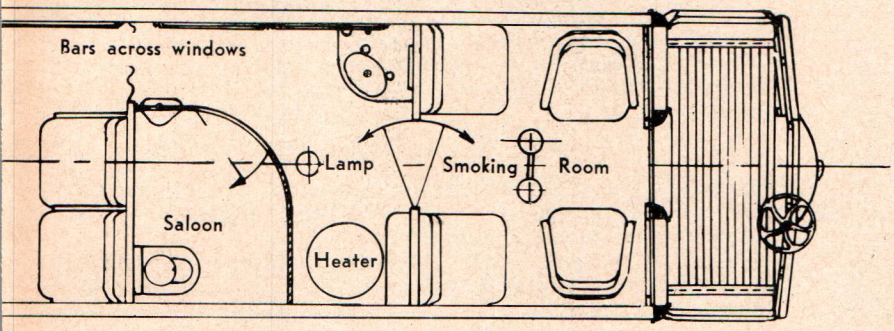
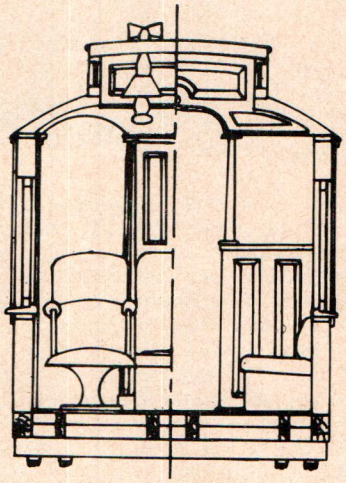
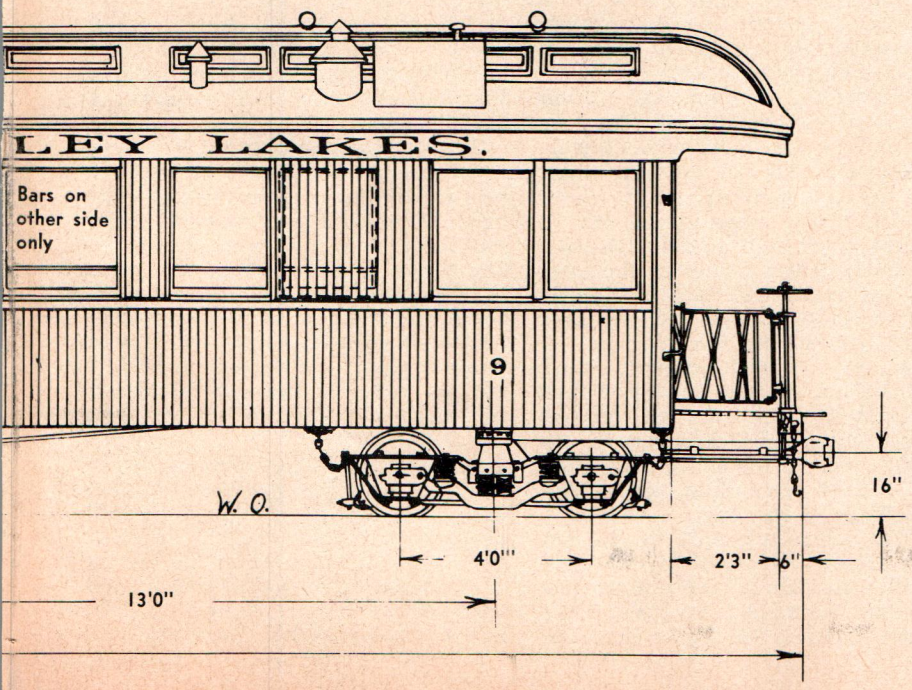
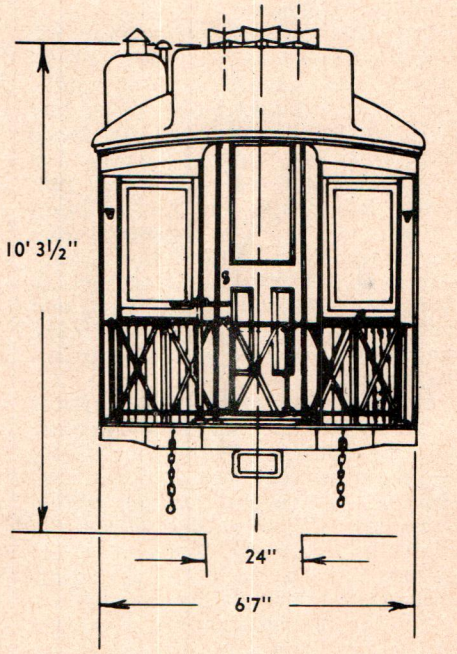
Sandy River & Rangeley Lakes Parlor Car



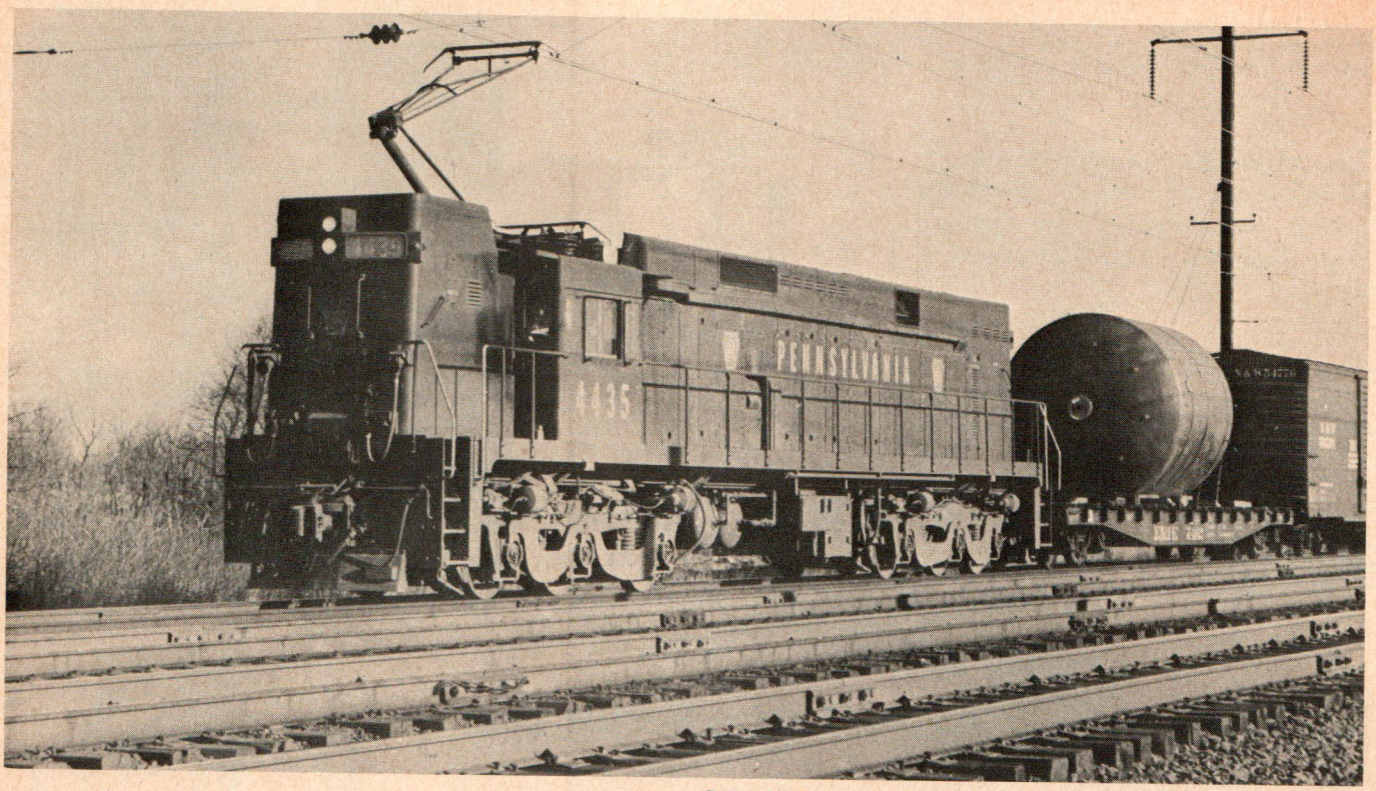






E-44 Conversion From U-25C

by Bill Schopp



Pennsylvania Railroad class E-44 locomotive with Faiveley lantographs lacks the sleek gracefulness of the GG-1 but is all locomotive insofar as pulling capacities are concerned. Loco has many similarities to General Electric U-25C diesel locomotive.

I WAS ABOUT to build a few more Pennsy E-44 electrics using methods described in the article in Dec. 1961 RMC — photoengraved sides, Kemtron side frames, Andeco geared trucks, and two big motors — when the new AHM U-25c came into view. It has what appears to be the same truck-frames, and is generally similar in outline, a likely candidate for conversion to an E-44. Although it is shorter than the prototype electric, there are, after all, a lot of model GG1-s running today that are shorter than they should be—and very little complaint is heard.

Naturally there are some other differences to be found in a simple conversion job (mine took three hours) than in a specially built model. The E-44 really doesn't have all those humps in the running boards, has electrical apparatus rather than fuel tanks underneath, and has different top and side detail on the hoods than the diesel. Withal, I think the conversion to be described comes reasonably close, with a minimum of work and cost, at least until such time as some manufacturer comes up with a truer-to-prototype E-44.

So . . . get yourself two of the AHM U-25c locos, any road name since repainting will be needed anyhow. Really you need only one loco and one extra superstructure, but the engine is so new that these are as yet not available separately. So far I've not figured what to do with the surplus mechanism but that will come in time.

You remove the superstructure from both U25c's (five screws each) as described in the instruction sheet in each box. Also remove the handrails from cab to steps on the low-hood end (bend tabs straight on inside). Remove the headlight and number-board lenses and light-tubes of plastic rod. Each of these is clipped between two studs inside. Unclip, then push the headlights in. Next, remove the cab from one unit. This is a separate assembly, cemented in lightly. Flex the superstructure gingerly to break it loose, then pry here and there with a screwdriver, flexing again and again until she comes off. The cab must be cut down. Then take a jewelers' saw and cut off the low hood. From the end you can cut in under it as far as the steps to the cab. It is necessary, though, to drill two tiny holes back in the corner of the step, floor, and hood, and feed the jeweler's saw blade through each of these in turn to complete the excision.

Now, on the other superstructure you'll find on the long hood, a scribed line about ¾" back from the end. Cut straight down here and across the top. This will be the short, high hood for the E-44, extending out to the end-railings of the engine. (Actually the U25c cab is too close to the end of the engine for an E-44.) Take a rough file and file off the side screening on the short hood. This will leave it white. Cut out the top to clear the Faively pantographs. Do the same on the long hood still attached to the engine.

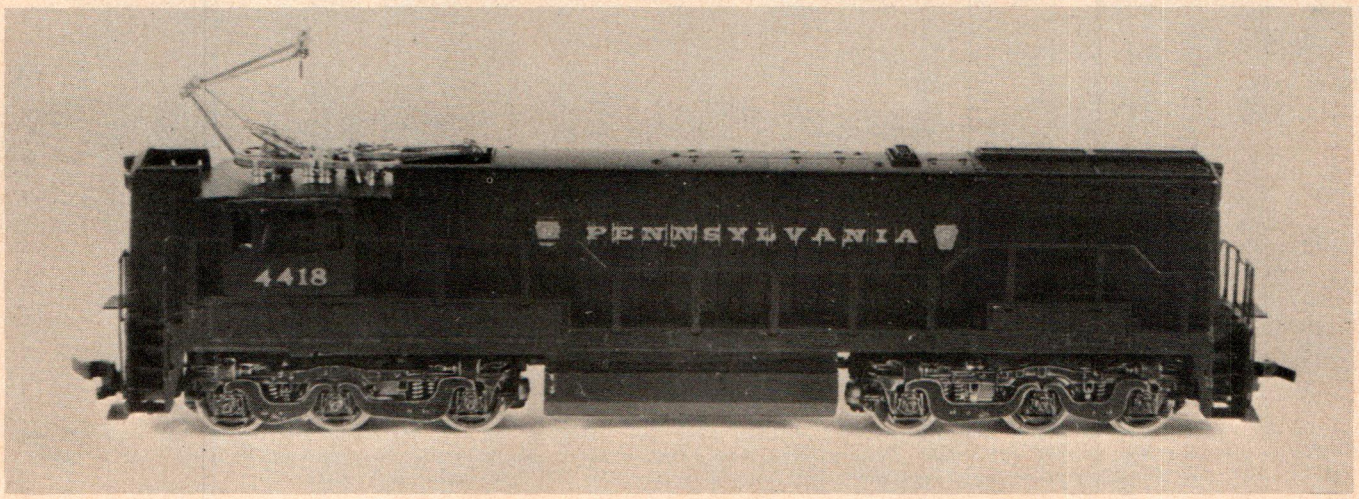
To cut down the cab, first remove all windows from it. Then cut it across to leave as high sides as possible. This puts the cab in two pieces, both sides with short ends attached. After the hoods are in place, cement the cab sides in place. Later put on a "roof" of plastic or fibreboard to cover the cab and extend back into the pantograph recesses in the roof. Reinstall the short side handrails at the short end.

As to the pantographs, Faiveley types are not now available here except for the few I imported some time back. However I will expound on the sources and if you want to try, or any other dealer or importer wants to have a go at it, they can get them. On the original E-44 model of 1961, I used 00 scale Faiveleys which were made in Austria by the firm of Liliput for sale in England on certain BR electric models. I believe these are still sold.

Later I found some, used on similar engines, made by the firm of Meccano (France) in Bobigny (Seine). (Apparently the French Meccano firm was not included in the merger of the British firm with Tring.) These are to HO scale, per the name of the line of trains, Acho. Normally they

In three hours you can convert two U-25C locos into a reasonably accurate freelanced version of the big Pennsylvania E-44 electric loco.

Author's E-44 utilized two AHM U-25C bodies to create a big modern juice jack presently not available in a commercial kit. E-44 was built in only one short evening, in about 3 hours.



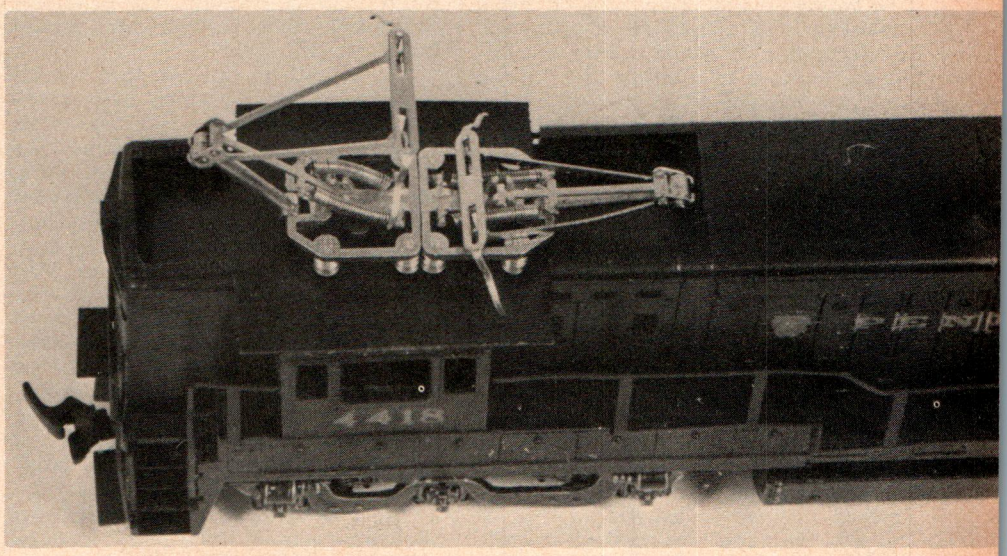
Photos by John Albanowski

Author's E-44 in a side view shows how short, high hood comes to end of deck. Moving cab back slightly would provide walkway around hood end as on prototype, would entail motor remounting.

do not sell "spares," maintaining their own repair department, but after a few months I did get some. Friends have also gotten them from dealers in France who snatched them off engines.

Since then I have learned of (but not seen) another Faiveley pantograph in HO scale used on a 12-wheel French electric model by the firm of Jouef which is sold in Britain under the name Playcraft.

So mount whatever pantographs you have — in a pinch standard types for expediencey, or even none at all —repaint the engine with flat black paint. Put on decals. Put in cab windows from the underside of the superstructure. Put in the headlight tubes. For the long hood, you already have a light bulb attached to the motor. But for the short hood you must, if you want light, work a grain of wheat bulb up behind the pruned plastic "lights," and wire it to the motor.

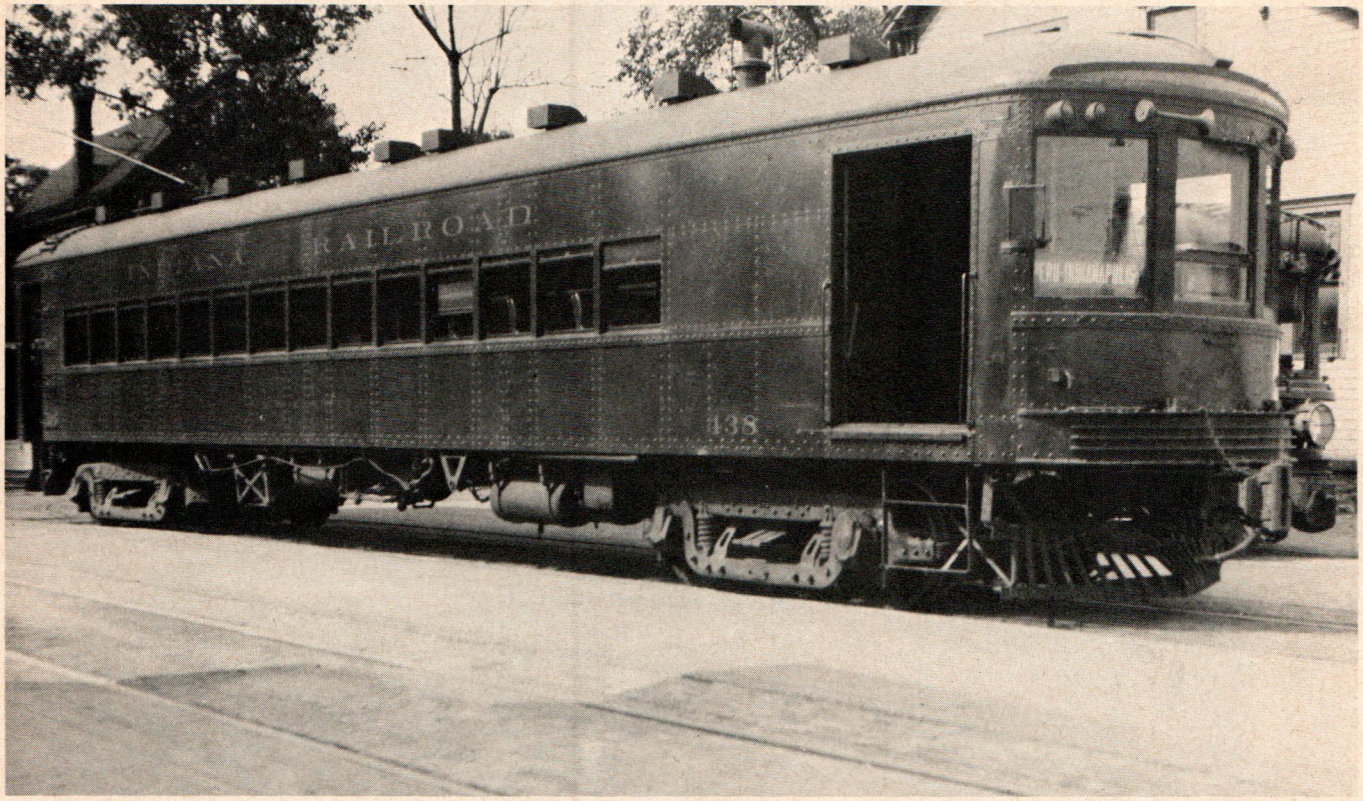


Top of hood is cut out to allow Faiveley pantographs to recess when in down position. Boxes under walkway of diesel are not found on prototype E-44; could be removed with additional work.

Interurban Electric Railways

Model interurbans have peculiar operating idiosyncrasies of their own, different from 2-rail model railroading, which can in most cases be turned into special benefits.

Part III **by C. Mischke**



Indiana Railroad No. 430, ex-Union Traction, one of 15 St. Louis built steel combines equipped for multiple unit operation. Four 125 hp. traction motors permitted running with trailers. Deep knuckles were required for breaks in grade, keeping train together. Car is named "New Castle", was photographed at Ft. Wayne and almost completely obscures IRR lightweight car in back.

THE dynamic characteristics of miniature trains with one or more powered cars differs from prototype performance. In scaling down dimensions, matters of friction and inertia are not diminished in the same proportion. Additional complications are introduced by the manner of drive and the crudeness (relatively) of bearings, bolsters and couplers.

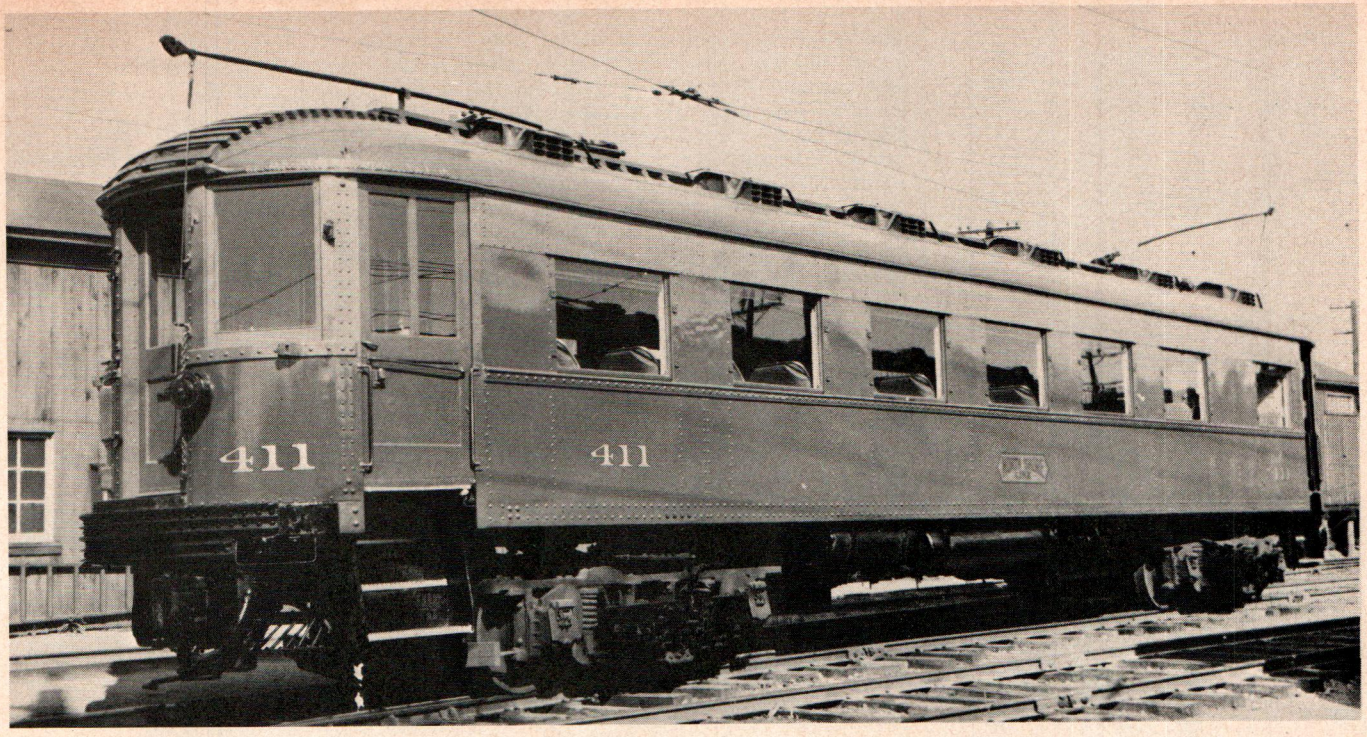
A model traction car is usually powered with one truck and, therefore, does not track equally well in both directions. The difference in performance with power truck leading and following is observable. This difference can be reduced by weighting the unpowered end of the car, particularly within the truck itself, as is done by Andeco power trucks in HO gauge.

A single car can have different speeds in each direction. This is usually corrected by moving brushes to the electrical neutral. Assuming that your power cars perform equally well in both directions and all power cars have about the same speeds at corresponding voltages, the problems of running model cars in trains should be examined.

Model trolleys are powered almost universally by a worm-gear drive and therefore will not coast, nor can they be pulled by others when the motor is not turning without skidding the wheels. Thus, when two model power cars are run in train, any disturbance that interferes with current supply can stop the train with one dead motor and one with the wheels spinning in vain. As annoying as this might be, it is fail-safe, i.e., you cannot flat a wheel on the dead car. Brass wheels flatten easily.

There are three weak points in the current path through a model traction car which require attention for satisfactory operation. These are the rail-wheel contact point, the holddown hook-pole contact point and the wire-pole contact point. The wire pole contact point tends to be self cleaning and nickel silver slider on nickel silver wire works well. Trolley men obtain satisfaction here. The holddown hook-pole contact is one that is subject to oxidation and vibration. Dirt and oxidation are minimized by staying out of the iron-steel family for both the pole material and the holddown hook material. The subtle enemy is vibration. I remember well two identical O gauge box motors that ran well seperately, but when coupled together ran poorly. The small variations in speed due to body vibration on the downpole wasn't too noticeable in single car operation, but when coupled together they added body jolts due to coupler slack action and the pair simply wasn't satisfactory. The rail-wheel contact is the same problem faced by two railers. The trolley man is better off because he has more pickup wheels.

The fact that the trolleys do noticeably better on dirty track than two rail cars is the clue to the solution to multiple car operation. Engineers faced with building a system whose



ABOVE: North Shore 411, built in 1923 by Cincinnati as an observation control trailer, was rebuilt in 1943 as a two motor coach, because of wartime traffic loads Colors, red and green.

BELOW: Waterloo, Cedar-Falls & Northern 101 was a full railroad-width 10'4" wide, and with four 125 hp. motors, was peppy. Car was built as parlor-buffet obs., later rebuilt with bagg. compt.

reliability must exceed that of components available, sometimes can resort to redundancy to meet specifications. If a rail-wheel contact is 90% reliable, i.e., completes a circuit satisfactorily 90% of the time, then two wheels in parallel to the same rail will exhibit 99% reliability, and four wheels in parallel exhibit 99.99% reliability. We have in the traction car itself (wired for selective rectification) four rail-wheel contacts in parallel, more than a two railer has on a diesel unit.

In a multicar train redundancy in the holddown hook-pole contact (the weakest link) and the wire-pole contact can be provided with a two wire train line which connects the cars. These two conductors place the motor brushes in parallel, and, in so doing, place (1) the poles in parallel and (2) the holddown hook-pole contacts in parallel, greatly increasing reliability. Thus a multicar train with active train line will operate if any one pole is contacting the wire well, if any holddown hook-pole contact is good, and any rail-wheel contact on each car is good. The important element is the paralleling of the holddown hook-pole contact.

If multicar trains are to be switched and consists adjusted, then it is necessary that trainline jumpers be detachable in a simple, convenient and reliable form. The smaller the scale the more important it is to have the connections above the anticlimber and, if possible, on the roof. The receptacle can be 1/16" diameter brass tubing, which, if over a half inch long, will make good contact with a slightly curved phosphor bronze wire as shown in figure 6. For semi-permanent jumper connections the scheme depicted in figure 7 is used by Fred Gibson in HO gauge.

A three motor model train, even with train wires, requires the motormans attention because a dead (wheels locked) car can be skidded by the two active motors. But this is merely paying attention to duty.

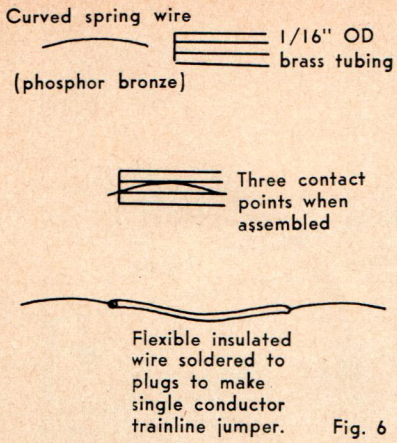


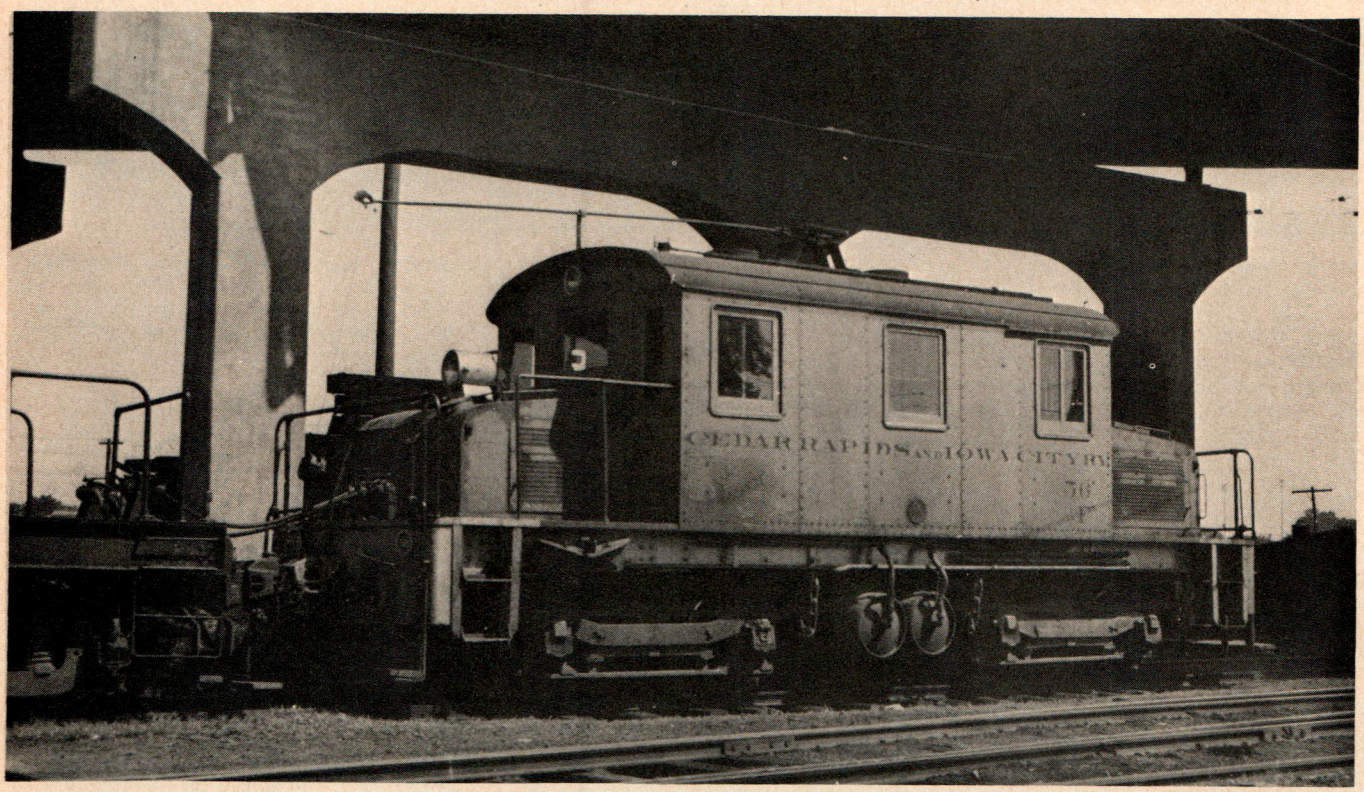
Fig. 6

Is the trainline really essential? The trainline becomes essential only when the holddown hook-pole contact has insufficient reliability. Harry Darst's beautiful HO Lake Shore Electric runs two selective rectification cars in multiple, flawlessly, without train wires. These cars are single ended with no second pole. Thus the wire-pole contact and the rail-wheel contact is sufficiently reliable for multiple unit operation without train wires. In double ended equipment, train wires can be avoided by bringing the holddown hook-pole contact to similar level of reliability. The convenience of avoiding train wires is worth a little extra care in making the holddown hook-pole contact a reliable electric switch. There is a motto that is good advice to all model railroaders. *"If you don't have time to do it right in the first place, where will you ever find the time to maintain it?"*

Loops, Signals and Track Polarity Control

Selective rectification circuiting is simplicity itself when applied to double-ended equipment operating on a point-to-point system. Even the occasion looping or wying to change the

Baldwin-Westinghouse built CR&IC No. 56 was typical of many such units on interurban and electric freight lines throughout U.S. and Canada. Design gave good visibility to crew during switching movements. There have been many models of similar locomotives.



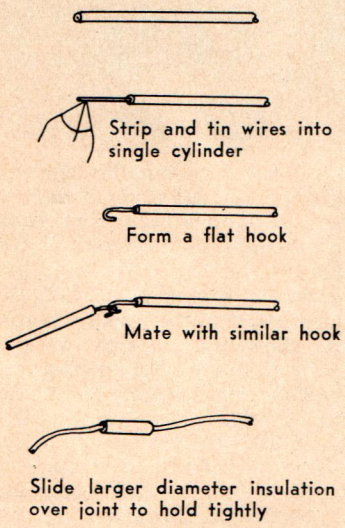


Fig. 7

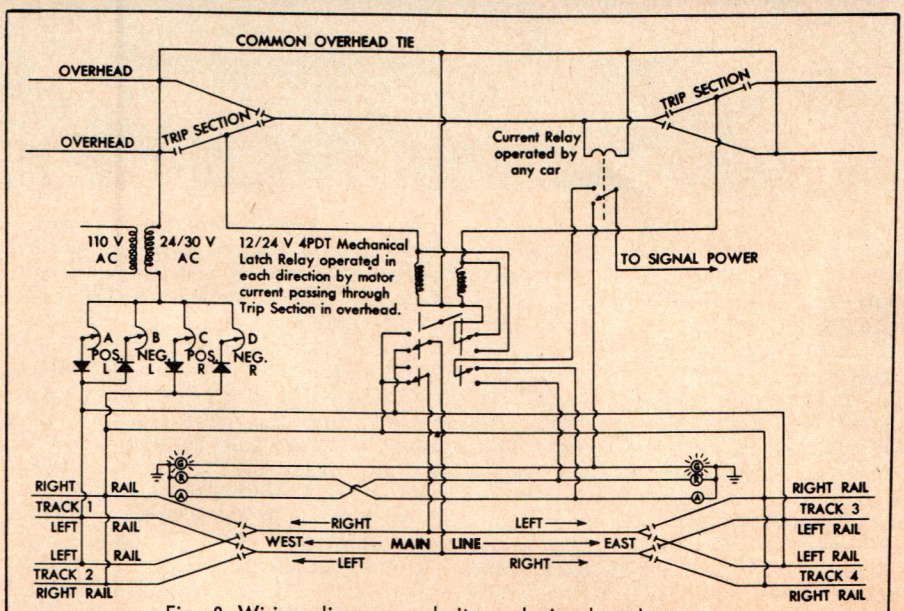
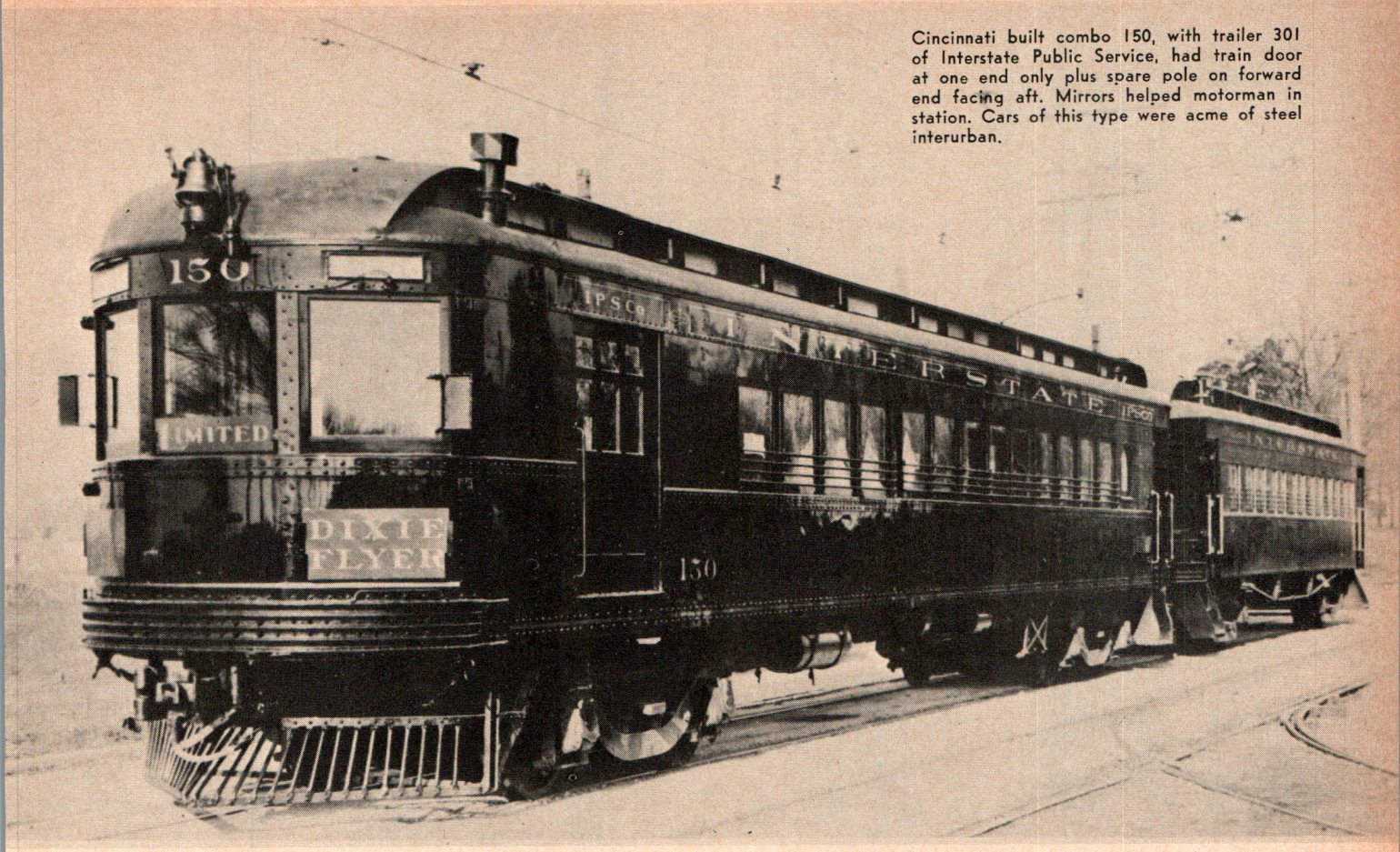


Fig. 8 Wiring diagram, polarity and signal system.



Cincinnati built combo 150, with trailer 301 of Interstate Public Service, had train door at one end only plus spare pole on forward end facing aft. Mirrors helped motorman in station. Cars of this type were acme of steel interurban.

identity of the cars (from A to C or from B to D, or vice verse) presents no problems.* This is because looping equipment is for the purpose of *changing* its specie. On a loop ended line using single ended equipment the purpose of the loop is to turn the car *without* changing its specie. This requires the track polarity of the mainline to be interchanged as the car comes out of the loop so that it will still respond to its specie controller. This requirement is met by dividing the single track and the passing sidings into blocks and using a 12/24 v. 4PDT mechanical latch relay operated in each direction by motor current passing through *trip section* in overhead wire shown in figure 8. Absolute-permissive three color light signals are incorporated into the wiring. For absolute-permissive interurban signals omit the green bulb (no light is clear block), substitute a white bulb for the amber (white light is permissive entry into occupied block) and leave in the red bulb (obsolute stop, opposing movement in block).

In order to visualize the electrical abstraction of figure 8, consider a double track, point-to-point line with end loops. This is the familar dogbone of layout planning lingo. We now have a single block, loop type railroad. The outer rail is the right rail and the inner rail is the left rail. When we attempt to replace a section of double track with single track we run into control problems because a westbound car wants one kind of polarity of running rails and an eastbound car wants another. The circuit of figure 8 aligns the single track polarity to agree with that of the first car to enter it, and simultaneously displays the appropriate signals to allow following cars and to indicate stop to opposing cars. A layout consisting of two return loops and three passing sidings will have four sections of single track.

The return loops and all the double track (passing sidings) are electrically one single block and the circuit of figure 8 needs to be duplicated four times to signal and control polarity on a single track, loop-to-loop line with three passing sidings. Of course the cabs A, B, C, and D exist but once. An eastbound car approaches single track, observes the clear block signal and passes through the spring switch from what is labeled track 2. When the pole enters the trip section of the overhead the left coil of the latch relay is momentarily in series with the car and the left contacts are raised and the right contacts are lowered. The raised contacts on the left align track polarity in the single track stretch to agree with that of track 2, and the lowered contacts prepare the circuit for offering an amber light behind the car and a red light ahead of the car.

As soon as the car's pole enters the single track overhead, the current relay is in series with the car and its actuation extinguishes the green light and illuminates the red and amber. Cars of different specie but in same direction can follow the car with completely independent control, subject to being able to clear stopped car.

If you wish to use Nachod type signals with only the white and red light, place the signal head about two car lengths into single track (on the model) so that the motorman entering a clear block with no light showing can see his own occupancy present him with a white light and he knows that he has protection. If no white light comes on, he is to presume that no protection exists and should come to an immediate stop, flag, and call the dispatcher as in prototype practice.

We have briefly surveyed the interurban world, examined some of its features and practices, considered how the model can be made to imitate its big brother in a convincing and convenient fashion. Just how all of this is particularized to specific models of a definite prototype, and how a layout can be synthesized as a convincing display as well as an operating challange can be the subject of another time.

Two railers speak wistfully of progressive cab control and how things would be "if only . . .". Traction men have it in independent four car control. Would you care to join us?

*See four car rectified control, Dorn, Oct., 1965, Jan., 1966.

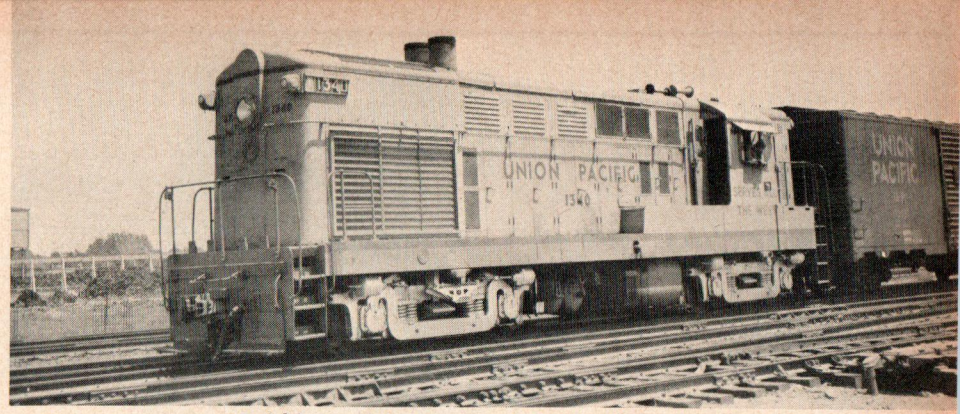
FAIRBANKS-MORSE H-15-44 (1947), H-16-44

F-M's husky road switcher originally sported sleek Raymond Loewy styling, later simplified in the interests of maintenance and lower cost.

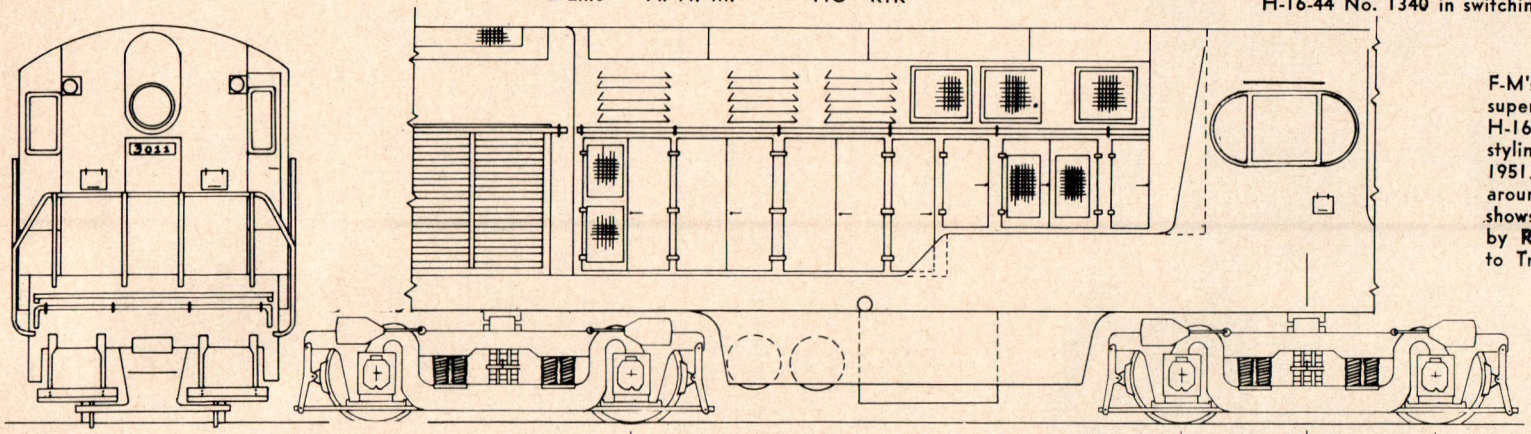
FAIRBANKS-MORSE MODELS

Certain F-M diesel locos have been offered in model form, in several scales. Some are no longer available but may still be available from local hobby dealers or in the used loco market. A partial listing includes:

H-20-44*	Baldwin MLW	O	Kit, BU
H-24-66*	Lionel	O	RTR
C-Line	Max Gray	O	BU
H-10-44	Hobbyline	HO	RTR
H-16-44	Pa. Scale Mod.	HO	Kit
C-Line*	A. H. M.	HO	RTR



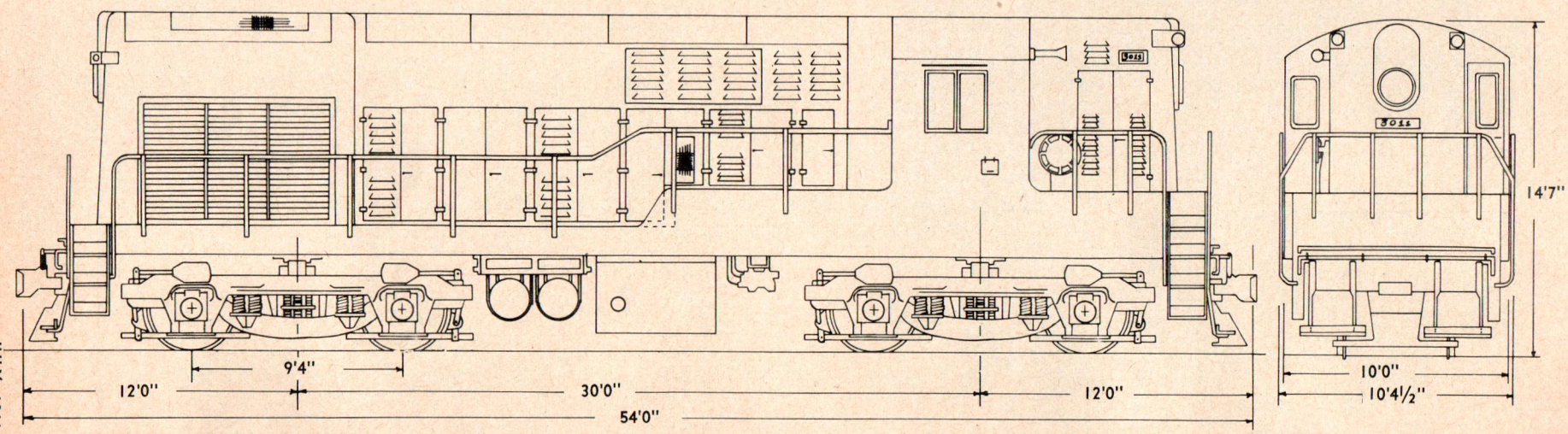
Rail photog John Brunner, of Omaha, Neb., shot this Union Pacific H-16-44 No. 1340 in switching service at Council Bluffs, in July 1963.



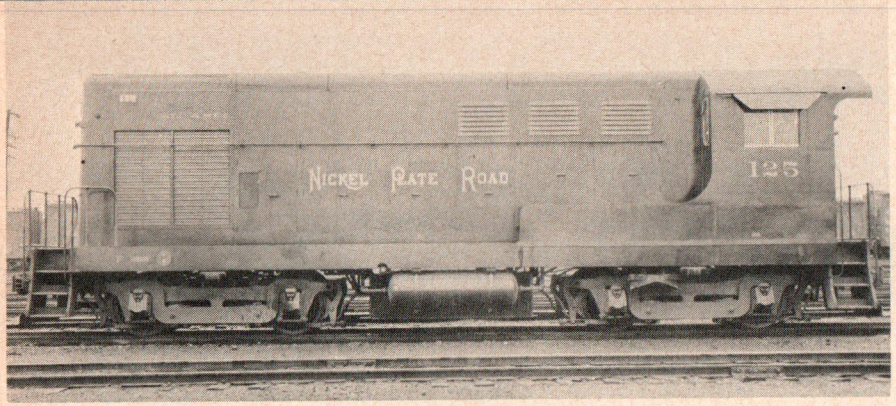
1948-1950 model as built for Union Pacific. Other detail the same as AT&SF model.

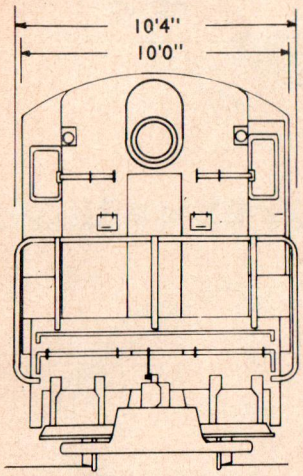
F-M's H-15-44 was introduced in 1947 and superceded by the slightly more powerful H-16-44 in 1950. Early units featured Loewy styling, which became more functional by 1951. Plans show the 1600 hp. version as built around 1951 for the Santa Fe. Insert view shows earlier Union Pacific version as styled by Raymond Loewy. Box styling led directly to Trainmaster design in 1953.

drawn by Larry Jackman



1951-1952 model as built for AT&SF.





Model H-10-44 was introduced in 1944, designed to fit Baldwin switcher frame. Steam type cab roof later gave way to conventional style cab roof. HO scale model was once offered by Hobbyline.

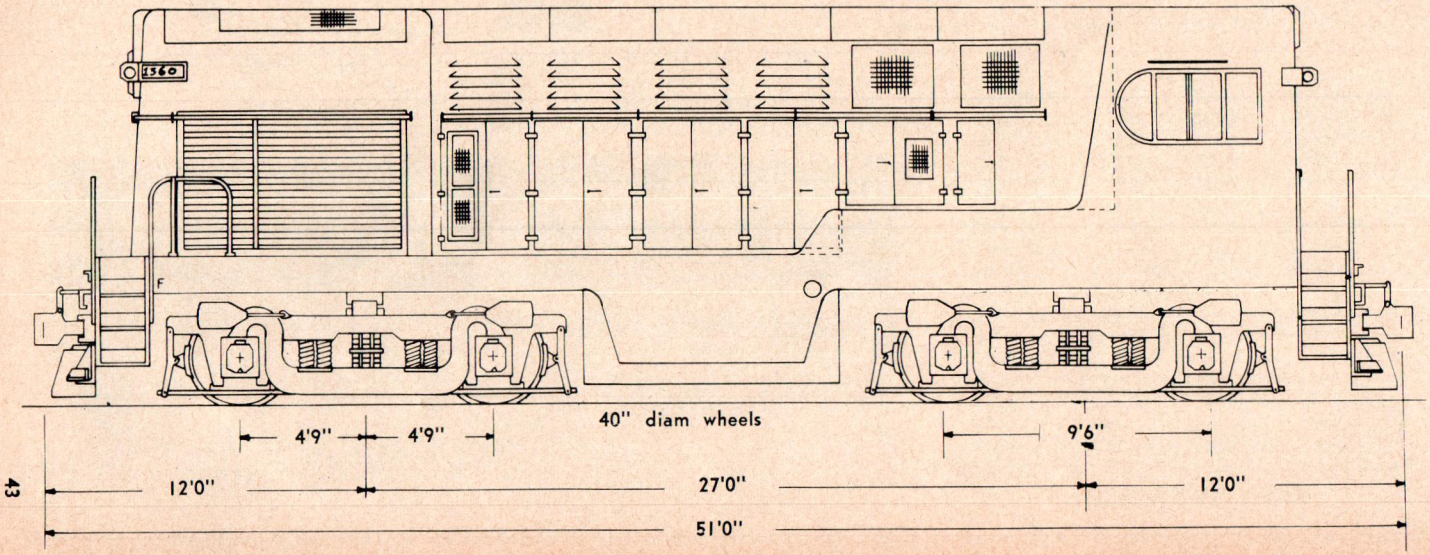
Model H-20-44 was introduced in 1947 with a stylized Raymond Loewy hood design, which later was functionalized by removal of excess sheet m and round cab windows. The 2000 hp. ad switcher was a powerhouse in her day.

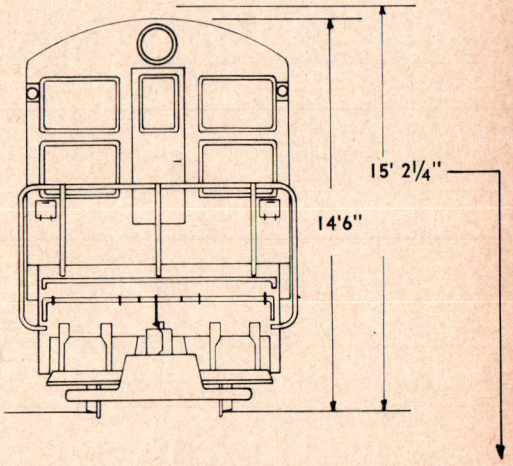
—1947

Some two feet shorter than the huskier 1500-1600 hp. F-M road switchers, the 1200 hp. Model H-12-44 measured 49'2" over center of coupler knuckles. Earlier version had overhang on cab roof. Design of F-M switchers was very similar to road styling.

FAIRBANKS-MORSE H-20-44 ROAD SWITCHER

Looking more like a yard hog than a road engine, F-M's H-20-44 packed 2000 hp. into her conventionally styled hood.





On units equipped with dynamic brake grids

Peter Cox snapped this weathered Canadian National CFA-16, No. 9336, at Quebec City in June 1962. Units delivered to Canadian roads were built at Canadian Locomotive Co. plant at Kingston, Ontario. CNR units were often seen on Central Vermont track.

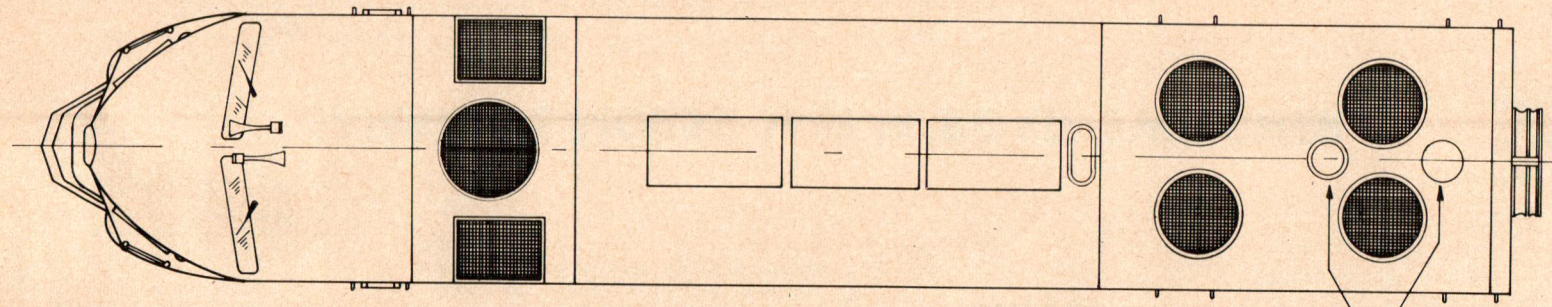
TECHNICAL DATA

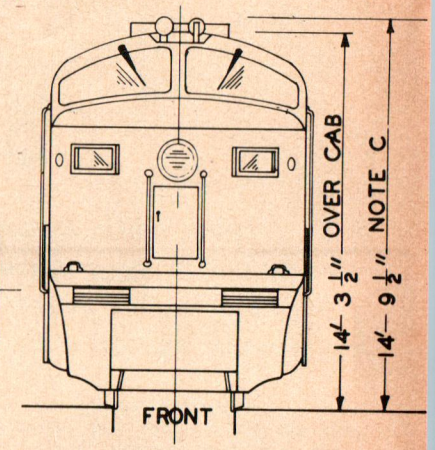
Fairbanks-Morse C-Line freight diesels were offered with optional 1600, 2000, and 2400 hp. arrangement, on B-B trucks. Locos had opposed piston diesel engines with variable gearing to order. Canadian Locomotive Company supplied same basic units to Canadian roads. The Model CFA-24-4 was never ordered. Model CPA-16-4, for passenger service, was built in Canada only.

Model	Wheels	HP.	Service
CFA-16-4	B-B	1600	Freight
CPA-16-4	B-B	1600	Passenger
CFA-20-4	B-B	2000	Freight
CFA-24-4	B-B	2400	Freight
CFB-16-4	B-B	1600	Freight
CPB-16-4	B-B	1600	Passenger
CFB-20-4	B-B	2000	Freight
CFB-24-4	B-B	2400	Freight

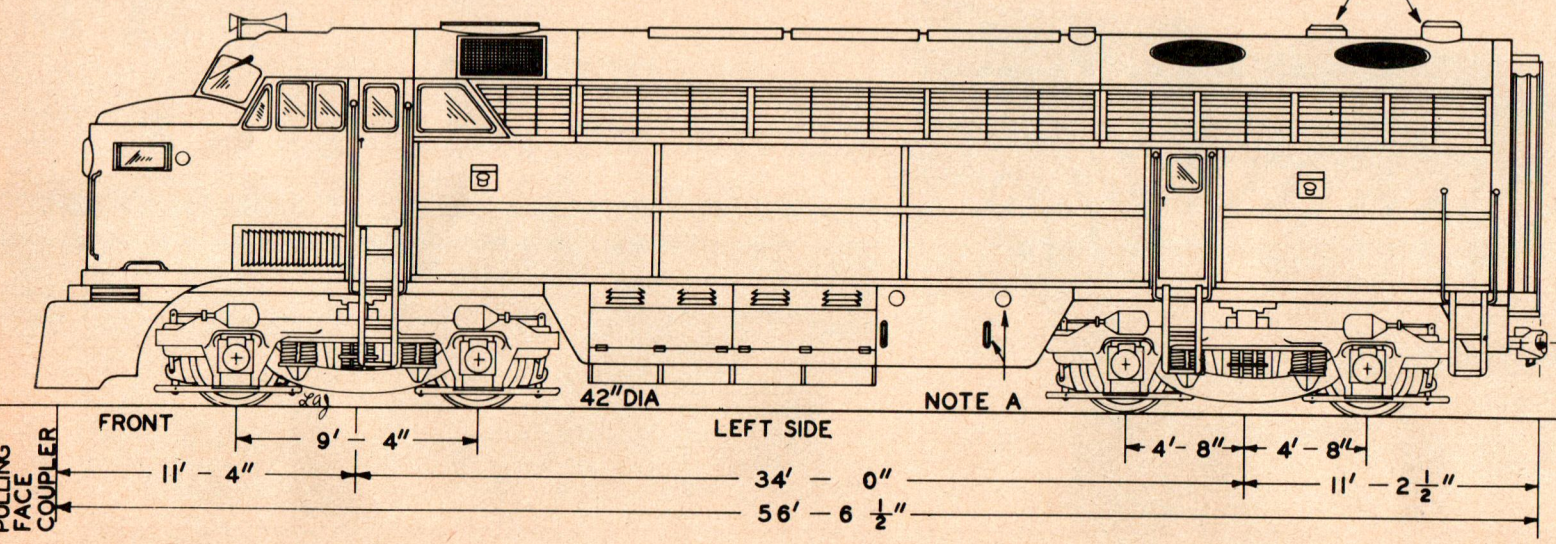
Fairbanks-Morse unveiled a new Consolidation Line of road diesels in 1950, offering railroads a wide range of horsepower in a standard cab.

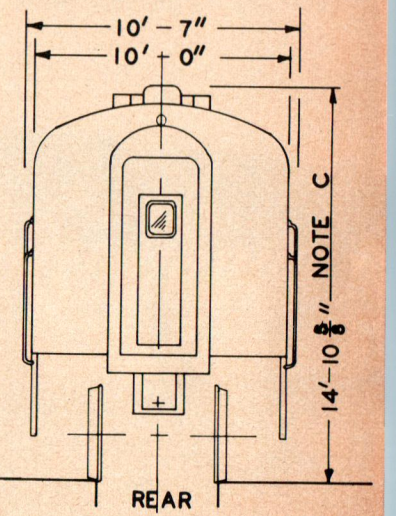
NOTE A—Boiler water filler and gauge on Model CPA-16-4 only.
NOTE B—Steam generator on CPA-16-4 only.
NOTE C—Overall height on CFA units is at horn.





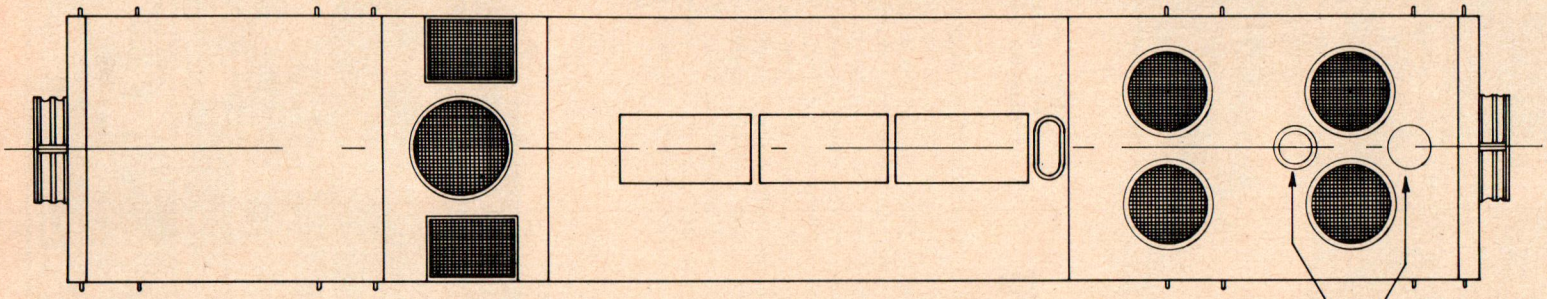
FAIRBANKS-MORSE C LINE 1600-2000-2400 HP. B-B TRUCKS 1950





CNR No. 9303, photographed in the old olive drab paint scheme at Truro, Nova Scotia, in May 1957, by Canadian Peter Cox

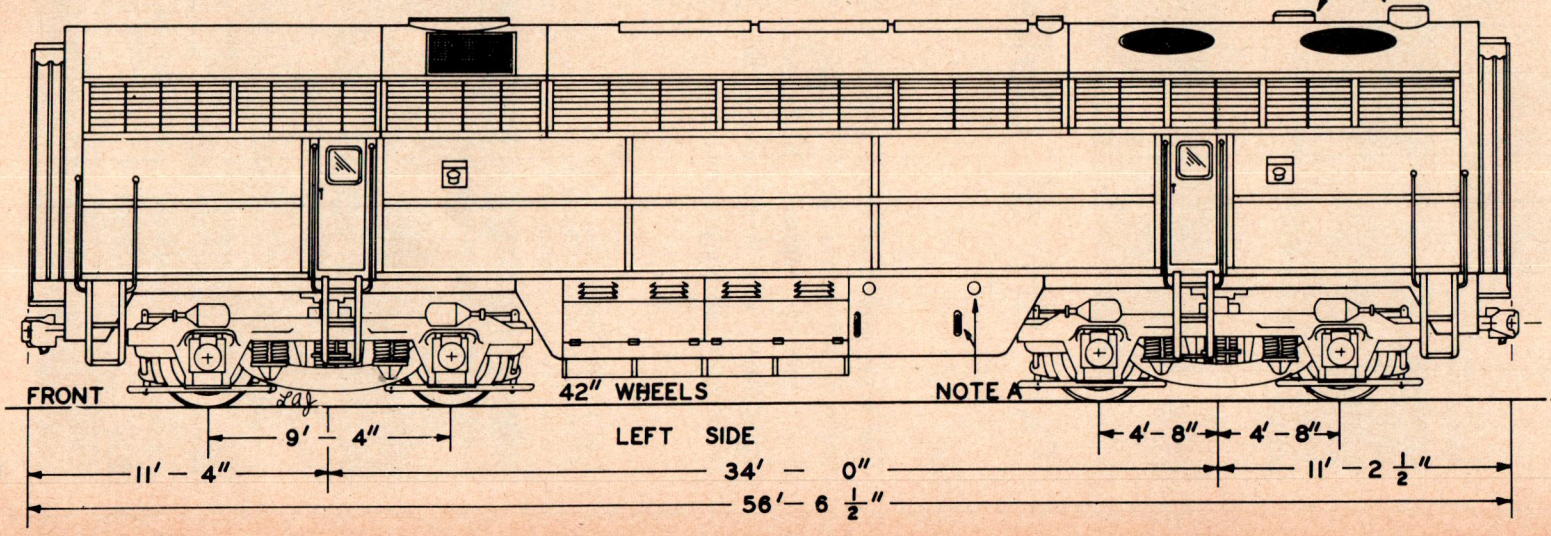
Canadian Pacific No. 4453, Model CFB-16-4, road class DFB-16, was snapped by Peter Cox at Vancouver, in a broadside view.

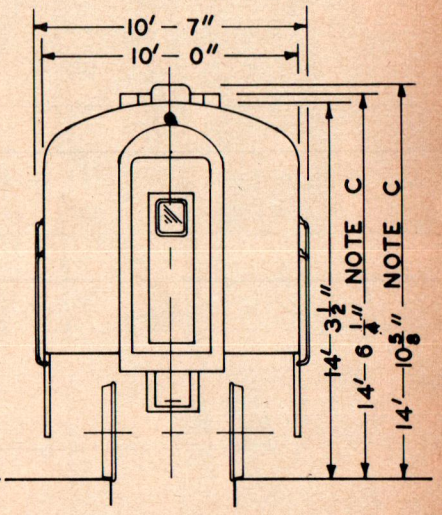


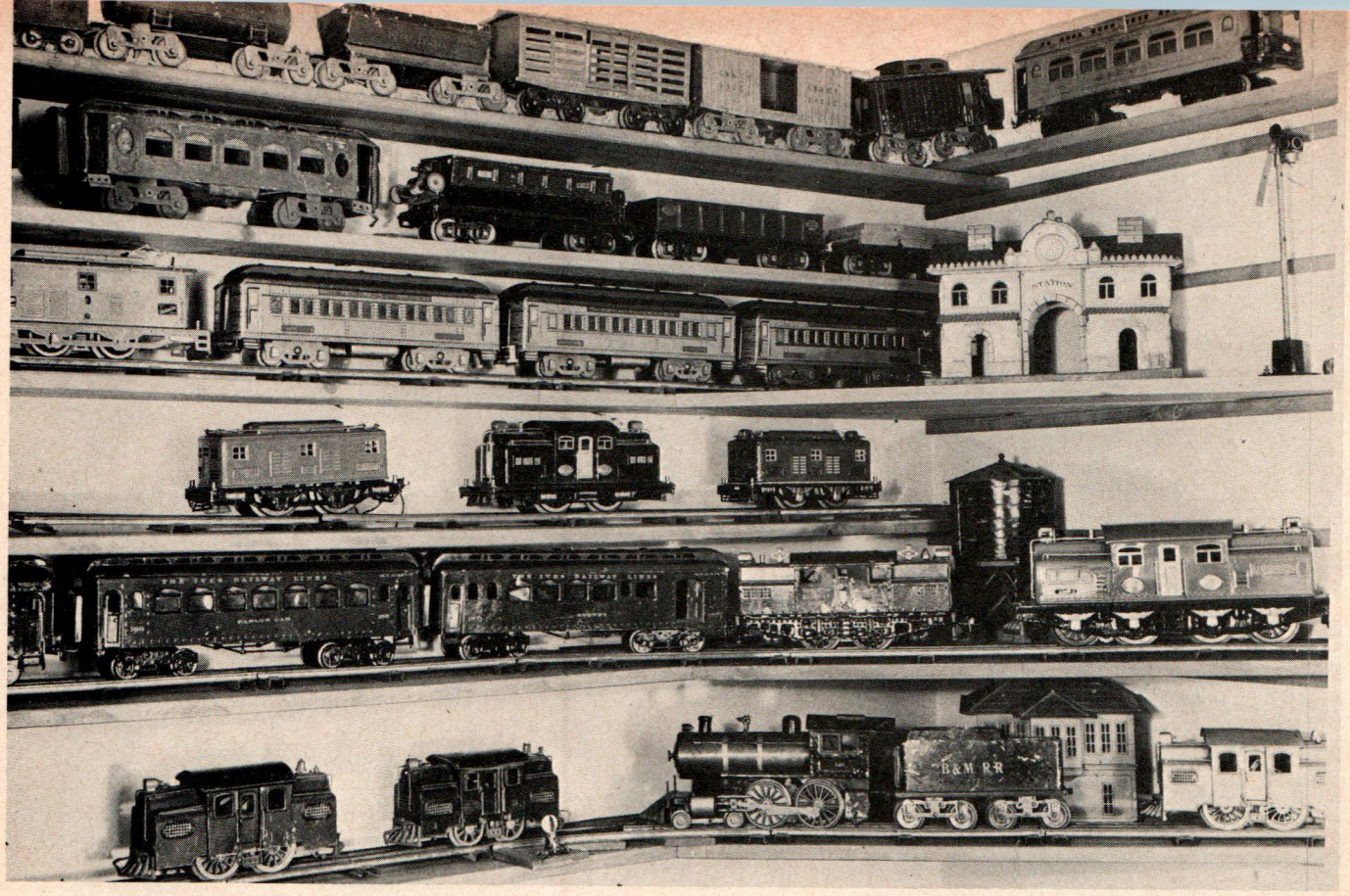
NOTE A—Boiler water filler and gauge on Model CPB-16-4 only. NOTE B—Steam generator on CPB-16-4 only. NOTE C—Overall height on CFB units is at dynamic brake fan, 14' 6¼". NOTE D—CPB-16-4 built only in Canada. No Model CFB-24-2 were ever ordered or built in either U. S. or Canada.

"CONSOLIDATION LINE"

Plans of additional C-Line diesels with B-A 1 A wheel arrangement appeared in Railroad Model Craftsman, Nov. 1965.







The Art of Collecting

The Edwin P. Alexander collection, now sold, was one of the country's best back around 1950, with many exquisite foreign pieces in the collection. Display was set up in an old barn.

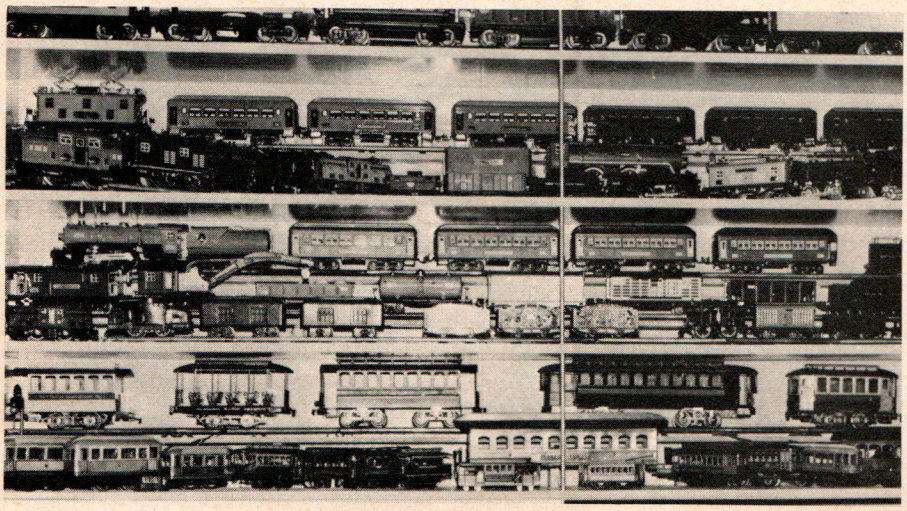
The train collector must provide shelves, adequate light, chairs, and should restore battered equipment, and keep adequate records of all his pieces.

IT WOULD be difficult to pinpoint the exact birth of train collecting but it roughly parallels the birth and growth of both the toy train manufacturing industry and the hobby of scale model railroading. Hobbyists started making replicas of trains at about the same time that the real railroads came into being. Commercially made wood and tin models of locomotives and cars dating back 100 years are not uncommon. Toy trains as we know them today, capable of operating on track and powered by clockwork engines, date from the 1890s.

Scale model railroading and toy train collecting as serious, popular adult hobbies both began in the early 1930s, though undoubtedly there were those who pursued the twin hobbies years earlier. The early *Model Maker* Magazine pictured scale trains as early as 1924, and the mechanics magazines depicted scale trains years earlier.

The first known articles on toy train collecting were written by Louis H. Hertz back in the summer and fall of 1937 in *(Railroad) Model Craftsman,* and was eventually followed by a whole series of articles in the same publication under the name "Along The Tinplate Track". An index to all these articles was published in the October 1957 issue of *Railroad Model Craftsman.* Lou Hertz, considered to be the father of the toy train collecting hobby, has also written a number of books on the hobby. The first of these was "Riding The Tinplate Rails", which was largely based on material appearing in the earlier magazine series, but largely rewritten and with much new material. Other Hertz books of toy train interest include "Messrs. of Ives of Bridgeport", "New Roads To Adventure in Model Railroading", and "The Handbook of Old American Toys". Certain other Hertz books on other subjects might also be of interest. Not all are cur-

One of the fine toy train displays on permanent display is that at Knott's Berry Farm, Buena Park, Calif. Most private collections are open to view only on special invitation or by arrangement.

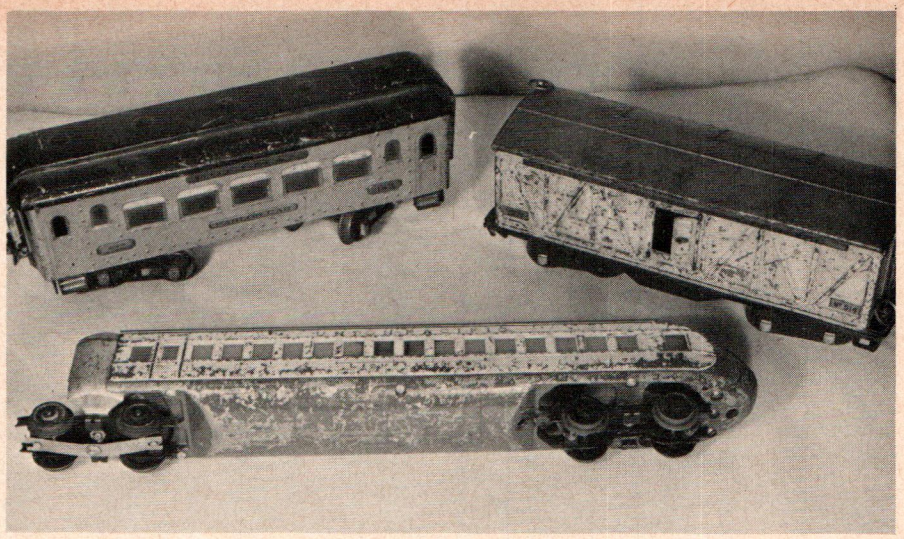


rently available. For availability consult any current advertisement for railroad and model railroad books, such as appears in *Railroad Model Craftsman.*

Other sources of information include the "Lionel Standard Gauge Era", published by Model Craftsman Publishing Corp., which describes most of the larger Lionel trains from 1906 through 1940, and the "Train Collectors Encyclopedia" by Bill Vagell.

Another interesting series of toy train articles was written by Case Kowal in *Toy Trains* Magazine during the early 1950s, and covers many different lines of equipment. Through the years, a number of authors have also shared their knowledge with other collectors through the pages of *Railroad Model Craftsman.* Other collecting articles can be found in back issues of *Miniature Railroading, Model Railroaders Digest,* and *Electric Trains.*

Most collectors also find membership in the Train Collectors Asociation a must. TCA divisions now cover the country and provide meets for the swapping of old trains. For membership information contact Eric Buckley, 501 Kissell Hill Road, Lititz, Pa., the national secretary. Actual membership must be procured through the local division in your area if there is one.



Battered equipment, once suitable only for parts, but today will be restored in their original colors with reproduction parts wherever needed. Restored items sometimes rate high in value.

Restorations

SOMETIMES comes as a shock to newer collectors that the old-timers don't often concern themselves with the operating capabilities of their pieces, though possibly the availability of parts equal in quality to the original may change some thinking.

Certain parts on locos and cars are prone to breakage and should be replaced, either with parts salvaged from wrecks that are not worth repair, or with top quality reproductions. Old time collectors were once hesitant about restoring old trains with non-original parts, but this was back in the days when replacement parts were of poor quality. In most cases, the addition of these top quality replacement parts greatly enhances both the value and the appearance. There is litle of beauty or nostalgia in a piece which has broken wheels and is missing such parts as couplers, headlights, pantographs, railings, and bells.

At one time many of the more common locomotives or cars were cannibalized for these parts. The growth of the hobby has made this practice rather costly, since even the lower priced standard gauge locos have appreciated to a large degree. It will probably be cheaper to use good restorations.

There is a point, however, at which the legitimate restorer of old trains should stop, and that involves the creation of scarce equipment out of common pieces. The Lionel 390E locomotive, for example is commonly found in black and in much rarer blue and green colors. Purchasers of such blue and green versions should be sure their locos are authentic as to color before paying an overly high price. If the paint is phoney, the engine would not be worth more than a legitimate black 390E and possibly somewhat less.

The same is true of locos equipped with phoney identification brass plates or rubber stamping. A Lionel 390E can be converted into a rarer Ives 1770E, though the fake can usually be spotted by an expert.

There also exist limited production runs of reproductions and the passage of time can be expected to see more of these come into being. Already on the market are such locos as the Lionel No. 7 and the Ives long cab 3245. These can usually be told from the originals and are usually made of brass rather than tinplate. Again, the buyer should beware. Possibly someday a service certifying as to the authenticity of rare old originals will be made available, as is done by the British Antiquities group certifying as to the age of certain antiques made in England before a certain date.

Since collectors usually place their equipment on shelves for display, many old time pieces never turn a wheel. At one time many locos and cars were unable to run because needed parts were missing. The availability of parts now makes it possible to watch these grand old units perform as they did 30 and 60 years ago, by clockwork or electricity. Among the collectors who have discovered the thrill of operating these old units are Arthur Pellissier, Dick Wheeler, Bill Krames, Lou Redman, Carl Pieper, and many others.

Shelves

Most old trains do end up on shelves, which can be simple or elaborate. Beginners usually start off with old bookcases or used glass store counters. As the collection expands, it becomes mandatory to put up shelving stretching from ceiling to floor. 1x4 boards are a common size, screwed in place with common brackets. A stud finder makes it easy to locate studs where walls are of dry construction. Shelves should be spaced no further apart than necessary, with O gauge equipment requiring less space than Standard Gauge. Always allow for extra high equipment, such as crane cars or cabooses. A Lionel 408 or Marklin live steamer will stand far higher than will a Lionel No. 10 or No. 8.

Perhaps the easiest way to put up shelves is by means of pilaster strips, available at most lumber yards. Three or four such metal strips are firmly screwed to the wall. These strips, in turn, accept movable brackets which can be adjusted up or down as the collection grows. The smallest such brackets we have yet seen are made to accept a 6-inch board, fine for the larger gauges and more than ample for O gauge. Some collectors rout out their shelf boards so as to accept the wheel flanges, as track would. Such grooves keep the trucks lined up evenly, save a valuable ¼ inch vertical height, and can prevent spills. Shelves, of course, should be painted. A light gray is a popular color that does not detract from the trains.

Collectors of HO might prefer thinner shelving, as little as ½ or ¼ inch wide. Such shelving needs support to prevent it from excessive warpage.

As collections grow, there is a tendency to keep everything and eventually the collection room takes on a cluttered look. Many collectors have so many variations that they must place their cars and locos in shelves with just the fronts sticking out. Others keep their collections permanently in boxes. Collections which can't be displayed properly might just as well not exist. Among the finest displays we have seen are those of

(Continued on page 54)

Corkscrew Canyon Railroad by the Layout Doctor

EVER since the original articles on HOn3 appeared in *Miniature Railroading* Magazine back in June 1941, interest in narrow gauge modeling has increased tremendously. Today, a large variety of locomotives are offered in both HOn and On for a large variety of gauges and prototypes, and in detail undreamed of in those days.

Narrow gauging can be a field unto itself, just as trolley modeling is. In most cases it is more fun to supplement the standard gauge pike with a narrow gauge subsidiary, or vice versa, so that the standard gauge railroad sets off the narrow gauge. In other words, without the standard gauge system to act as a foil, the narrow gauge railroad would not seem as small as it is. This is shown very effectively in Bruce Bowden's HOn2 layout in the June 1966 *Railroad Model Craftsman,* wherein a length of abandoned standard gauge track contrasts starkly with the slim 24" gauge.

The Corkscrew Canyon Railroad is a good sized narrow gauge pike packing in a bit of dual gauge trackage, as well as a small HOn2½ narrow gauge system up in the mountains, strictly an industrial or mining road, using Eggerbahn or AHM Minitrain equipment. There is, incidently, no reason why the railroad couldn't also be built as a standard gauge system, in any scale. Each of the rules along the edges equals one foot in HO scale. Double them for O gauge. S gaugers should make them 18 inches. Make them about 9 inches for TT and about 7 inches in N gauge.

The story of the line is this, when valuable ore was discovered high in the hills around Corkscrew Canyon, a railroad was required to get the ore down to a processing plant, centrally located. Because of the steep hills and sharp curves and because of economy, narrow gauge was decided on. Don't be misled by the layout plan, for in real life the mines were *not* almost directly above the processing plant but quite a few miles down the crooked and hilly terraine of Corkscrew Canyon. I've had to compress things a bit.

So, the railroad was laid out, from Port Morris (on an inland lake most likely, where car floats could take cars to and from the new railroad) past the ore processing plant at Suydam and on up the steep grade to Corkscrew station. At this point, a steeper branch line railroad connected to the actual mine shafts, mostly in the upper right corner of the pike.

To provide extra revenue, the little railroad was extended across a long bridge to serve two coal mines with but a single breaker, at Summit. To connect with another narrow gauge railroad, and so get some interchange traffic, the line from Summit was extended downhill to the town of Emmaline near which connection was made with the other road—actually, of course, itself.

All this and more has been drawn up for you in an eight by fifteen foot area, with two mountainous areas built on what could be pieces of 4x8 panel built right into the main tablework. The layout could be said to be E-shaped. It differs quite a bit from the pikes I usually draw, not so much because of gauge, but because it has to be accessible from all sides—since there is switchwork that is NOT concentrated toward the front edge as I usually try. This means several operators would be needed for maximum running.

The 18" wide, and rather short, appendage to the platform at upper left has been utilized for the ends of the Port Morris yard tracks. These are all connected by #4 switches, with the yard lead and station track sloping toward the front at 14°, which is the angle of #4 switches. This apparent double track continues only as far as Suydam where it becomes single for the climb up to Corkscrew. There we have a long passing track (and the branch comes in), and again single iron across the long bridge to Summit, where there is another passing siding, which is on the grade. Single track runs down from the end of the siding past Forge into Emmaline.

At Emmaline, passenger trains as well as freights pull in on the leftmost track, while engines head out the escape crossover, around the wye, to the enginehouse. Another engine then switches the train into the yard as required. Strangely the right leg of the wye is also a part of the Port Morris yard lead. This state of affairs lets the top leg of the wye form part of a *Continuous run,* a quite distorted oval, whenever point to point operation palls or becomes impossible because of a lack of operators. When point to point operation is being done, then either of the parallel "cut-off and interchange" tracks can be used to hold cars being set out by one railroad for delivery to the other, and vice versa — both railroads, of course being the same.

Let's examine some of the special features I've "built" into the Corkscrew Canyon RR plan. Feature #1 is the branch line from Corkscrew running up the inner wall of the canyon, crossing above Corkscrew, to serve a little nest of two mines. For the sake of letting you use a greater variety of motive power, this branch is intended to have its own motive power to push cars up and let them down to the connection with the main line. The engine, which would always be at the down-hill end facing down-hill so that the fascinating motion of the Shay cylinders, etc., would be visible to spectators. Notice that at the top of the grade there is a small enginehouse, suitable for either of the above.

The loading facility at High Peak is actually for a mine which is atop another peak due "north" across the valley. Ore is transported from the mine to the loading site in one of the little aerial ore transport cableways that are available from dealers handling European imports.

The siding to the High Peak loading facility faces the wrong way! That is, it seems impossible for an engine to get a car in or out of there if the engine is to be on the downhill end of the train. Of course you could use two engines, but you will notice that the siding slopes uphill toward its end so that cars can be allowed to coast into it after being held by brakes up near the enginehouse—and perhaps nudged a bit by the finger of Operator III. Cars can also coast out of this siding onto the bridge, to be picked up by the engine which has been waiting next to this siding to get them on *its* uphill end.

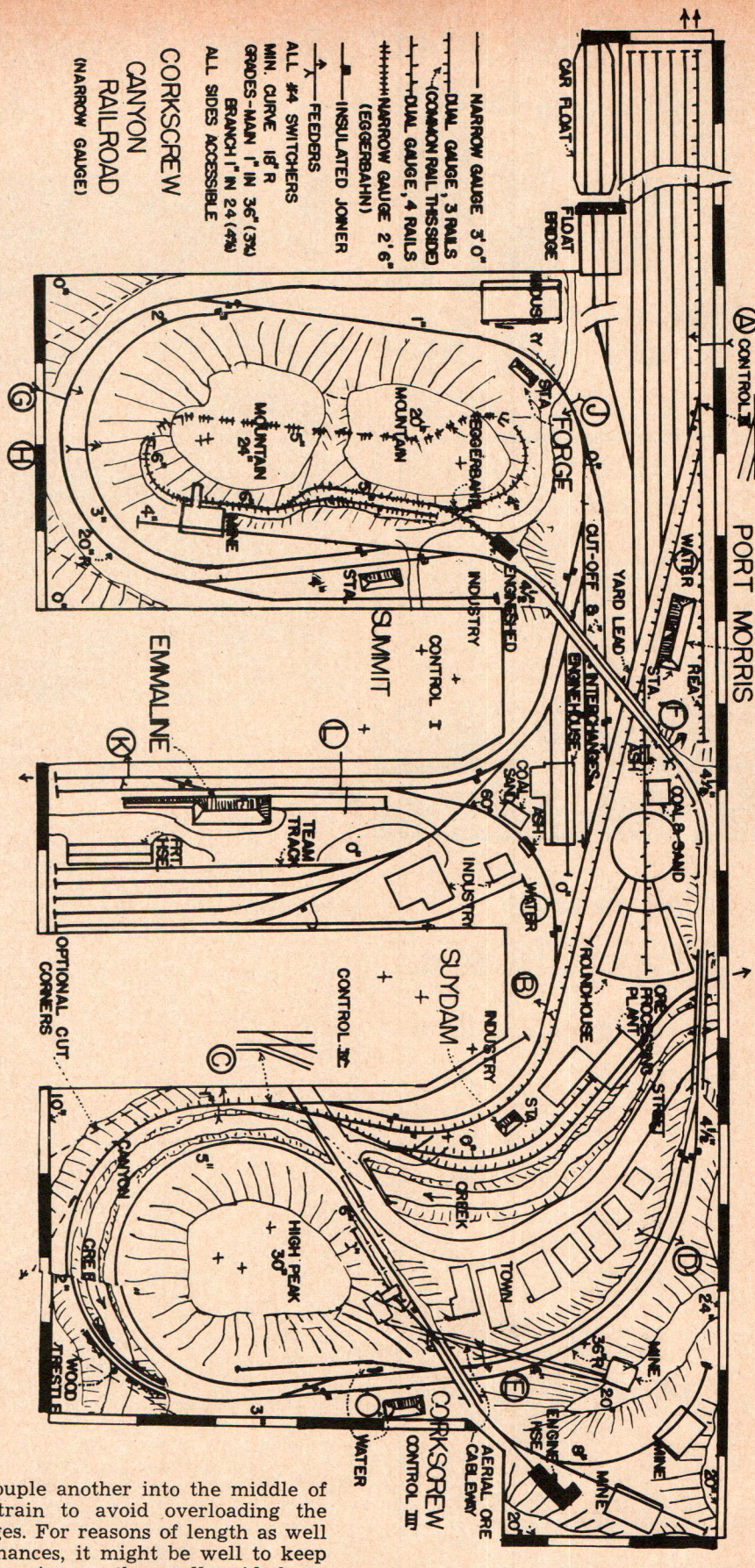
At Corkscrew, cars can be set out on the short unadorned siding opposite the depot to be picked up by a through freight. Alternately, the branch line could assist in coupling the cars to the through train. Needless to say, if there were more space available toward the right of the plan, this branch line could be wound through more hills to serve more mines and mining towns. With the movement of hills toward the right this would allow, there would be space for a somewhat larger terminal or interchange facility at Corkscrew.

Feature #2, the ore cableway has already been mentioned. I often wonder if one of these, or its brother passenger cableway, has even been built into a home model railroad layout? Surely they are fascinating enough in design and operation to get much more use that they apparently have.

Feature #3 is the HOn2½ industrial line, with little dump (and log) cars built to HO scale, and either a little gasoline engine, or diminutive 0-4-0T. The track is really N gauge, or HOn2½. I show it at the Twin Mountains Coal Mine at the left serving two mines run into opposite ends of the peaks, with a breaker at a convenient point between. I don't really believe a gasoline type engine would be quite correct in a mine because of monoxide fumes, but luckily these do not bother plastic miners. Of course, an actual mine loco is quite low.

Feature #4 is the introduction of some standard gauge track which is really a necessity on any HOn3 lay-

This giant narrow gauge system is suitable for any gauge or scale; is set off by dual gauge trackage to emphasize ng size.



out in order to show how narrow the main trackage really is. So, I have brought standard gauge in from the left running it into the REA siding behind Port Morris station, and also down in front of the station (connecting with roundhouse), past Suydam, and partway up the grade. This is so that the two sidings into the processing plant can also be served by standard gauge cars.

Please notice in the legend that the trackage marked with the half-cross-hatch is dual gauge, and that the rail common to both gauges is on the side of the hatch-marks. This will require four dual gauge #4 turnouts which several specialists will make for you if you quail at the idea. However, two of the other turnouts, as indicated by little diagrams to the left of Port Morris and below Suydam, are really plain narrow gauge switches, but with the straight part having the third rail for standard gauge trains set on over-length ties completely outside the narrow gauge switch and separate from it except for a guard rail opposite the common switch frog.

To get the off-center narrow gauge track centered for entry to and exit from the turntable, the narrow gauge is pulled toward the center by guard rails making four-rail track for that purpose. One of the roundhouse stalls is similarly equipped with 4-rail track, narrow gauge centered between standard gauge rails.

The trackage to the ore processing plant is already shown disappearing under the higher level bridge, and it too could be extended in the future as space, time, and money became available.

The dual gauge trackage which ends partway up the hill to Corkscrew could be extended as standard gauge on about the angle indicated to the lower right corner of the layout area.

In large part, motive power for the Corkscrew Canyon, if built in n3 would be a matter of what you have and what you like. If you are loaded with D&RGW outside frame Mikados, that's what you'll use for power. There are different 4-6-0's available, as well as a 2-4-4T with outside frames; in theory not too suitable for hilly running but I believe usable, especially in multiple. Narrow gauge switchers are not too plentiful. You could us any of the road engines, or maybe a C&S 2-6-0, 2-8-0, or D&RGW modernized Montezuma. Shays are also switching engines.

If you build a narow gauge railroad, be sure you take full advantage of the narrow gauge lines predeliction for double and triple heading, even though you may not need it. Put two engines at the head end, with another one pushing to get up the grade. May-be couple another into the middle of the train to avoid overloading the bridges. For reasons of length as well as finances, it might be well to keep your engines on the smaller side here, say moguls and consolidations instead of mikes—but it's your railroad.

Two-railing is as per standard, with insulated rail joiners in both rails at the ends of all control blocks, feeders for each block. While switchers are specified as #4, implying all-rail frogs in case you build in plain HO, there are many places outside of the yards where #6s and even Snap- or Tru-Switches could be used. The 2-rail circuiting will take care of all of these.

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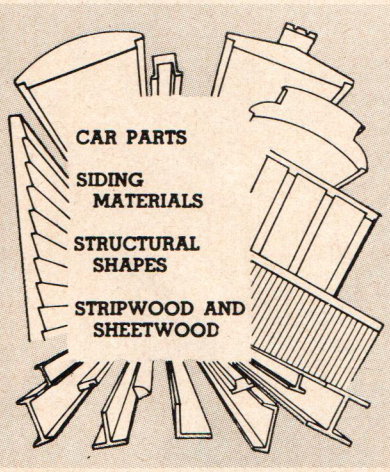

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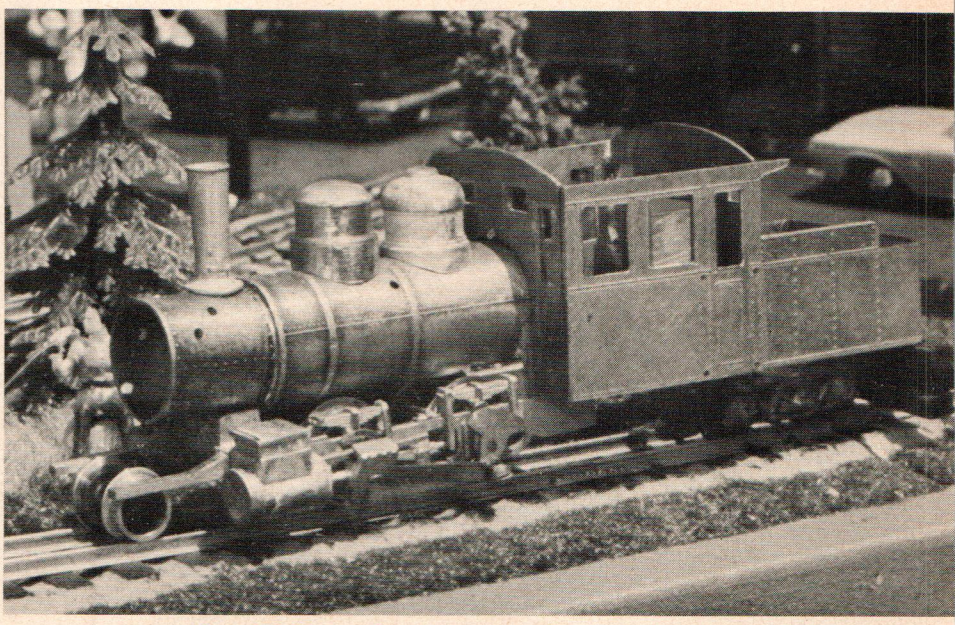
Some Thoughts on NARROW GAUGE



HOn2 SR&RL No. 9 under construction. Superstructure and main frame are from Narrow Gauge Ship. Drivers and pilot truck were cut down from Kemtron HOn3 wheelsets. Big Lindsay motor (not shown) just fits in cab. Truck under tender is Bowden design

NARROW Gauge — Bah, Humbug! Well those may be your feelings but amongst serious modelers today the fact remains that narrow gauge in all forms has really caught on.

Most dyed-in-the-wool type railroaders are men of great imagination and persons who think in depth. Model craftsman have historically been individualistic and abhore conformality. We often speak of the stereotyped railbug but look closer at his handicraft, there isn't a model pike around that looks exactly like another one.

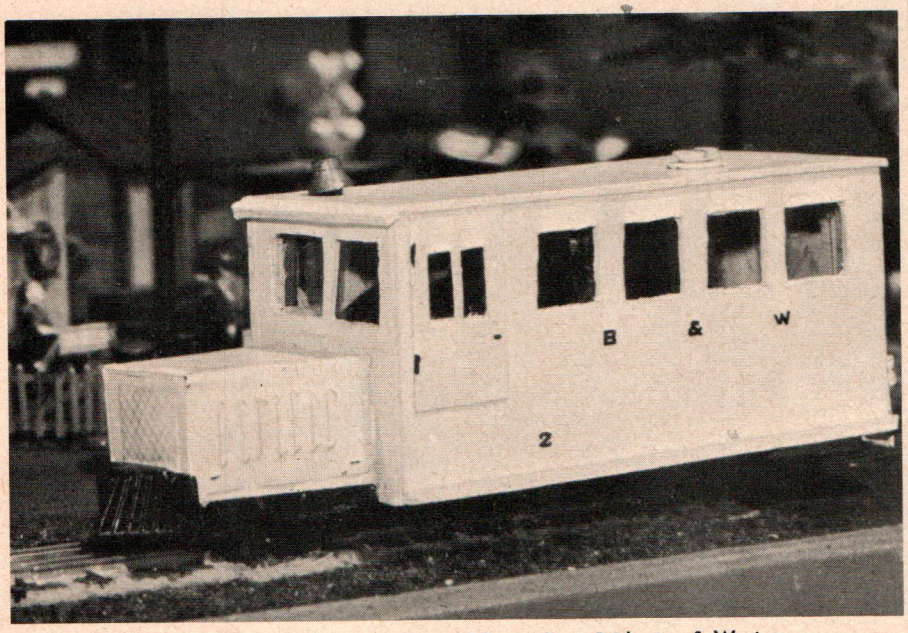
With the application of plastics to the model hobbies shortly after the war and the impetus this gave to the toy train market, a great tide of convention followed. Prices came down and we all bought the same things and soon our pikes developed a likeness. But here was where the serious modeler, the core of our hobby, departed. In his desire to be individualistic he supported the great influx of fine Japanese locomotives at prices hither-to-fore unheard of. Crosskits caught on like wildfire. New materials and painting methods were introduced and much recognition was given to persons creating highly detailed, intricate structures. The move towards narrow gauge, something smaller yet applying the same degree of detail followed.

Now narrow gauge as such isn't new. There were at least two fine On2 layouts operating down east at least twenty years ago. In fact the railbus pictured above in HOn2 operated over a nine foot point to point layout in 1944. The body was made of cardboard and the drive came in part from an old Walthers Birney. The cowcatcher was from a Mantua Mogul, and the embossed aluminum from Howell-Day. She rattled an shook along code 100 steel rail and dragged a cardboard gon with cut down Walthers wartime trucks. Narrow gauge fans in the east generally followed the Maine two foot prototypes while those in the west developed after the Rio Grande three footers.

Narrow gauge roads once flourished in many parts of the country but today only a few sources remain for prototype material of the two major systems. There is the Edaville in Massachusetts and the Durango to Silverton line in Colorado. We have the late Ellis D. Atwood and Nelson Blount to thank for preserving the two footers and several enterprising people in Colorado for the thrill of Las Animas Canyon. Although the three foot lines of the Rockies operated more mileage, this is not to say that the two footers were any less prevalent. In fact there was one two foot line in Blackhawk, Colorado, right at the foot of Central City. Then there was the three foot Boston, Revere Beach and Lynn back east, and so it goes. Industrial trackage, mostly two foot is everywhere, even today. In any case, there is much source material and prototype information available. Although the Rockies no longer echo to the sound of heavy freights it is still a thrill to observe the canyon walls and trace the three foot lines to vantage points

The neophyte narrow gauger has to make a choice between not only the different scales but also the different gauges.

by Bruce C. Bowden



1944 vintage HOn2 railbus, lettered for author's Bridgeton & Weston. Chassis was built up on old fibreboard ruler with gear box and motor from old Walthers Birney. Cardboard body resembles SR buses.

where they virtually lept off into space.

Just how practical is narrow gauge to model? A few short years ago it wasn't very practical at all because of the lack of parts, particularly running gear components. Unless you were a skilled craftsman the likelihood of coming up with satisfactory motive power was almost nil. Time has changed all this. First we saw the introduction of TT gauge by Harold Joyce. Then followed the Kemtron line of fine castings and wheelsets. PFM brought out their HOn3 locomotives. Numerous parts became available that could be adapted to HOn3 and n2. Now we have the 9mm products and the vast line of miniature components that have grown out of the model motoring hobby. The authors HOn2 2-4-4T pictured above while under construction was built up from readily available parts.

Some modelers use 9mm track and components for HOn2 to take advantage of that fine equipment just as fans used TT gauge for HOn3. The small difference in gauge is only discernible to the most discriminating. However the Egger-bahn and AHM locomotives can be modified to two foot gauge without too much difficulty. In fact they can be adapted to HOn3. Thus the posibilities in narrow gauge today are wide and varied, and yet there is not the profusion of equipment to make things too easy.

Another area not to be overlooked in any discussion of the practical aspect of narrow gauge is that it is compatible with any gauge in which you are modeling. For you newcomers to the bobby, that is to say that you are still working in the same scale, only the distance between the rails has changed, and thus you can have several different narrow gauge lines on the same layout.

One might also examine the future of the hobby before venturing into narrow gauge. Some of us still recall with candor the introduction of MO back in the 30's. There has been a continuous trend towards miniaturization and we hear in some quarters thoughts of 9mm scale replacing HO as did HO replace O gauge as the leader in the trade. Many of us feel this will not come to pass as the times have changed significantly. HO was introduced when the railroads were in their prime. The romance of steam, the profusion of heavy traffic brought about by the war, etc. served to keep the railroad industry foremost in our thoughts. This situation provided a healthy market for HO after the war. Then, too, there is a point where something can become so small that it is no longer a pleasure to work with. Many older men have gone back to O gauge for just this reason, they just can't see so good any more. For these reasons 9mm will have limited interest and never challenge HO. Assuming HO remains the lead gauge and in view of the continued interest towards super detail and further miniaturization, HO narrow gauge offers a field that will remain a challenge to all serious minded model fans for many years to come.

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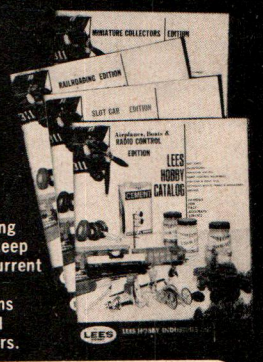

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EXCHANGE: Mallory U.H.F. all channel converter, exc. cond. FOR: Small steam eng. James Bryan, 410 Rehr St., Reading, Pa.

EXCHANGE: Recent Official Guides & equip. reg.; pre-war Model Builder Mag., Model Craftsman Mag., trolley tokens & tickets. FOR: AHM or Athearn Hopper cars, AHM covered hoppers, any rd. John Parker, Rt. 1, Box 106G, Aiken, S. C.

EXCHANGE: Some issues Old Trains, Craftsman, etc. also some "O" & "S" ga. items of interest. FOR: GG 1s or "O" ga. trains. Swap lists. John Graef, 7304 Turtle Creek, Dallas, Texas.

WANT: AF Loco #4689, pass. cars, exc. cond. E. I. Mankin, 4945 Eubank Rd., Sandston, Va.

EXCHANGE: Up Crown Challenger 4-6-6-4, latest super detailed model, dual pwrd., mint cond. FOR: GN Crown R-2, 2-8-8-2 or United Crown NP Yellowstone, 2-8-8-4. C. R. Wood, 3815—51st Ave. SW, Seattle Wash.

EXCHANGE: Anything I have in HO, etc. FOR: Used or new Sierra 2-6-62, Baldwin Mallet 2-4-4-2, PFM Climax or Hiesler, or what have you? Mike O'Connell, 614 No. "J" St., Tacoma, Wash.

WANT: PFM B-2 Shay, any color, any cond. Need not work. Low price important. Larry Wilson, News Dept., C F C O, P.O. Box 630, Chatham, Ont., Canada.

EXCHANGE: Lionel Locos 773 Hudson, 2322 FM diesel, 2359 BM GP 9 diesel, Manhattan pass. cars. FOR: Std. ga. locos 9E, 318E, 400E, 402E, 408E. F. F. Smith, 21 Ballyronan Rd., Don Mills, Ont., Canada.

EXCHANGE: Lionel 027 for Lionel HO. SAE for list. All replies answered. Jim Merrill, 35 Gardner St., Waltham, Mass. This ad repeated from May issue, had wrong address.

PASS EXCHANGE

M. D. & S. RY.: (Printed) John D. White, 2025 E. 72nd St., Chicago, Ill. 60649.

THE NORTH CENTRAL RAILROAD: (Printed) Clinton O. Larson, Box 508, La Crosse, Wis.

BUFFALO CREEK RAILROAD: (Printed) Paul V. Pullen, Box 381, Jerusalem Rd., Kingsville, Md. 21087.

SONOMA VALLEY RAILROAD: (Stock Ctf.) Scott Schiechl, 3915 Mission St., San Francisco, Calif. 94112.

BALTIMORE & OHIO RAILROAD: (Printed) Patrick Wm. Gagliano, 460 Cedar St., Lansdale, Pa. 19446.

ELK VALLEY RAILROAD: (Printed) Dr. Frank E. Kindler, 415 Fourth Ave., Tarentum, Pa. 15084.

TROIS-LIGNES EASTERN ATLANTIC RAILROAD: (Printed) W. E. Hogg, 20 Whitehouse Rd., Woodcote, Reading, England.

KUMSEE & KOMMENT RAILROAD: (Printed) Jim Lewis, 66 Royal York Rd., London, Ont., Canada.

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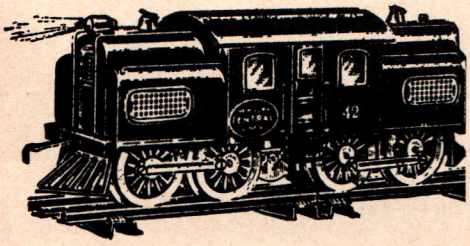
STANDARD/WIDE GAUGE trains, trolleys, toy train catalogs, Erector/Meccano sets, Cast Iron Toys, WANTED. Alden Miller, 3212-34th Avenue South, Minneapolis, Minnesota 55406.

The Art of Collecting

(Continued from page 46)

Bill Krames, Lou Redman, Bob Davenport, Warren Schuch, Chester Holley, and Russ Hafdahl, and there are many more as good or better.

Where circumstances permit, the train room should be equipped with acoustical ceiling tile and wood or tile floor, and finished walls. Good surroundings do much to set off a collection that might be worth a great deal of money. A dirty basement does no more for a train collection on shelves than it does for a model railroad system. It makes one itch.



Another good investment for any collector or modeler, too, is a four drawer filing cabinet. Here should be neatly catalogued for instant reference such things as catalogs, train lists, photos, misc. literature, unbound back issues of magazines, and correspondence worth keeping.

The wise collector will also keep careful record on his purchases, keeping track of all expenditures and costs incurred, with periodic conservative estimates as to relative value of all equipment. Your local insurance agent might also advise you on the costs of insuring your collection against fire, theft, and other calamities.

There are several means of identifying equipment in your collection. Cardboard tags attached with strings are used by some collectors but tend to be unsightly. Small press-on tabs fasten easily to the underside of most pieces without damage and provide a place to put your collection code number. The presence of such tabs, when from the collections of well known collectors, can sometimes enhance any piece.

And finally the complete collector will want a guest book in which visitors can sign in.

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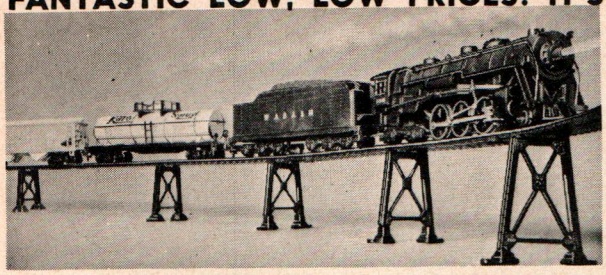

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The easy, realistic, way to run your trains up and over! Includes 30 graduated trestle pieces and ramps, plus girder bridge section. You can save $2.00 by ordering now.

Reg. Price $3.98

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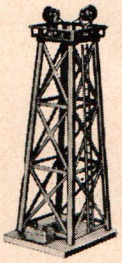
32654	Rectifier 3 Amp.	7.98	3.98
32661	Powerpack 1 Amp.	10.95	4.39



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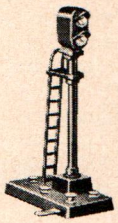

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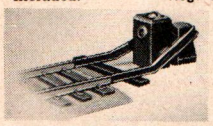

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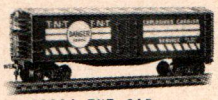
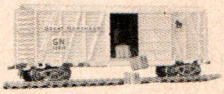


33804 TNT CAR

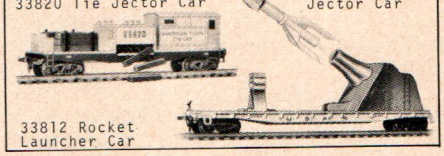
ACTION CARS

ELECTRIC REMOTE CONTROL

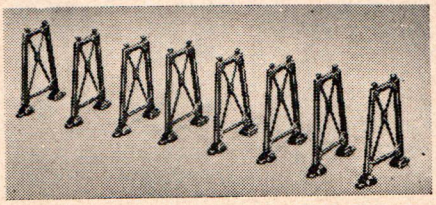


33818 GN Hay Jector Car

33820 Tie Jector Car



33812 Rocket Launcher Car



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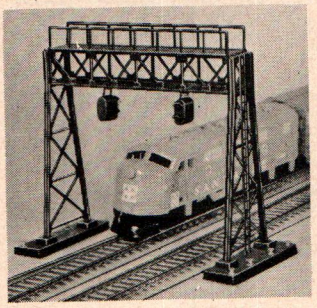

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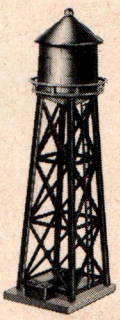

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Reg. $1.98 **Sale Price 98c**

ACTION CARS

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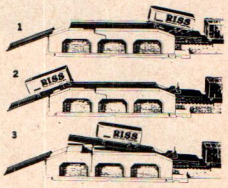
33806	Mine Exploding Car	7.98	3.19
33818	GN Hay Jector Car	4.98	2.39
33820	Tie Jector Car	4.98	2.39

Piggy-Back Unloader & Car



No. 35790 — This new accessory unloads hitch-hiking trailers AUTOMATICALLY. In picture #1 Flat Car backs into unloader, causing trailer to ride up ramp. Then, while Flat Car is hauled away to finish trip (Picture #2) Trailer is pushed down inclined ramp to street, to be unloaded. Unloading completed, trailer is pushed back up ramp again and Trailer Loader is tilted (Picture #3) to permit trailer to roll down to waiting Flat Car, which has returned from its trip. Set includes One Truck Trailer, Railroad Flat Car and Accessory.
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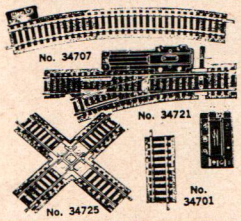

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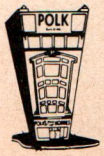

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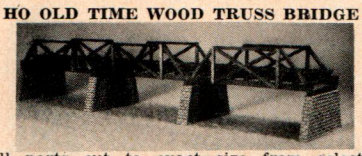
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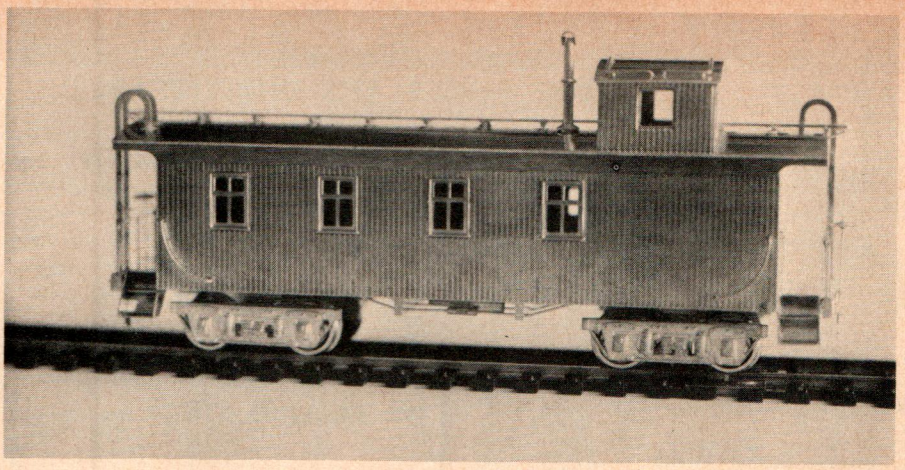


Burlington truss rod wood caboose is all-brass HO import by Trains, Inc.; comes fully assembled less couplers and paint.

TEST TRACK

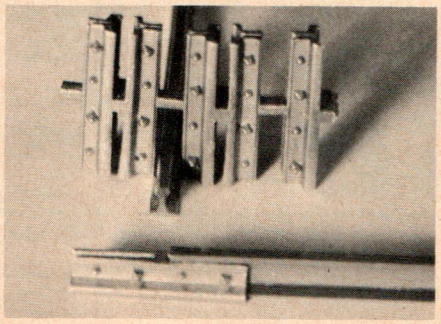
(Continued from page 15)

ing the two halves together, eliminating the need to notch ties to prevent raised joints. Being cast, they include prototypical bolt and nut detail. It is necessary to file away about 1/32" from the base and web of each rail end to be joined, to permit the two rail heads to butt together properly. These list at $1.75 per dozen.

Uncemented plastic slip-on joiners are also offered at $1.00 for two dozen, for use at insulated joints. The modeler cements the two halves together, and when dry follows the same procedure as with the investment cast rail joiners described previously.

Dummy rail joiners are also offered, which the modeler can cement to rail heads every 39 ft. to simulate rail joints. The effect is especially pleasing when a razor saw is used to cut the rail head through partially, so that the rail actually appears to be laid with prototype lengths 39 feet long. These plastic joiners list at 90c per 48 and have the same bolt and nut detail as the investment cast joiners.

These new track items cost somewhat more than standard track components but may be worth it to the modeler looking for the utmost in prototypical appearance. Samples can be had from La Vancil for 10c.



O scale AREA .148 and .125 rail sections are offered by Gene La Vancil, along with cast metal or plastic rail joiners having bolt and nut detail; are unusual design.

CB&Q Wood Caboose: HO

Imported by Trains, Inc., 5710½ W. Diversey St., Chicago, Illinois 60639.

An all brass assembled unpainted Burlington wood caboose is now available from Trains, Inc., imported from Japan. The design is a traditional long wood job with high off center cupola and long style caboose trucks, not unlike coach trucks in appearance.

The car is handcrafted of heavy brass. The floor can be unscrewed from the body for those who want to add lights or interior detail. The car is made to accept standard type draft gear boxes into pretapped holes.

Car wheels are conventional contour. The car will take 18 inch minimum radius or better.

A photo of Burlington Caboose 14112 appeared in RMC July 1960 issue, page 47, and is generally identical except for having only three windows per side plus a stack located just the reverse of the one on the model. Also the model is equipped with truss rods whereas the photo depicts a later steel framed car. Aside from not including the correct numbering information, the car is a dandy and needs only paint, lettering, and couplers to operate, plus extra detail if you are so minded. The design of this caboose could best be labeled classic. She is a little jewel that would be at home on the rear end of any freight. List price $11.95.

Snow Shed: HO

Mil-Scale Products, Box 4144 Western Station, Milwaukee, Wis. 53210.

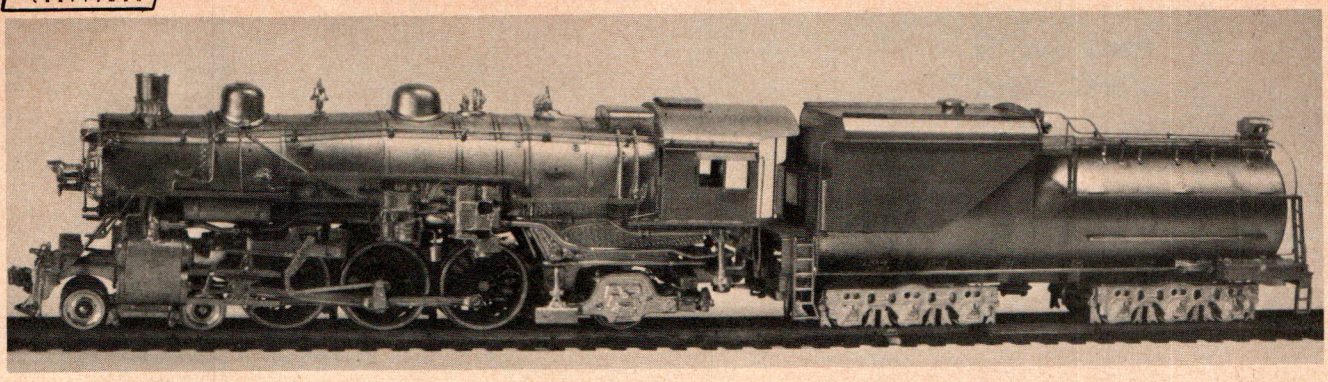
We believe this to be the first snow shed kit offered in kit form for HO modelers. Until now, they have been seen but rarely on model railroad layouts.

Mil-Scale's kit assembles beautifully and the finished model justifies the time spent in construction. Our model is the single track version. A double track is also offered.

All wood parts in this kit are cut to exact size except for the outer wall planking. If you follow the manufacturers suggestions regarding the cut-

LOCO BUILDERS PHOTO - 268

4-6-2

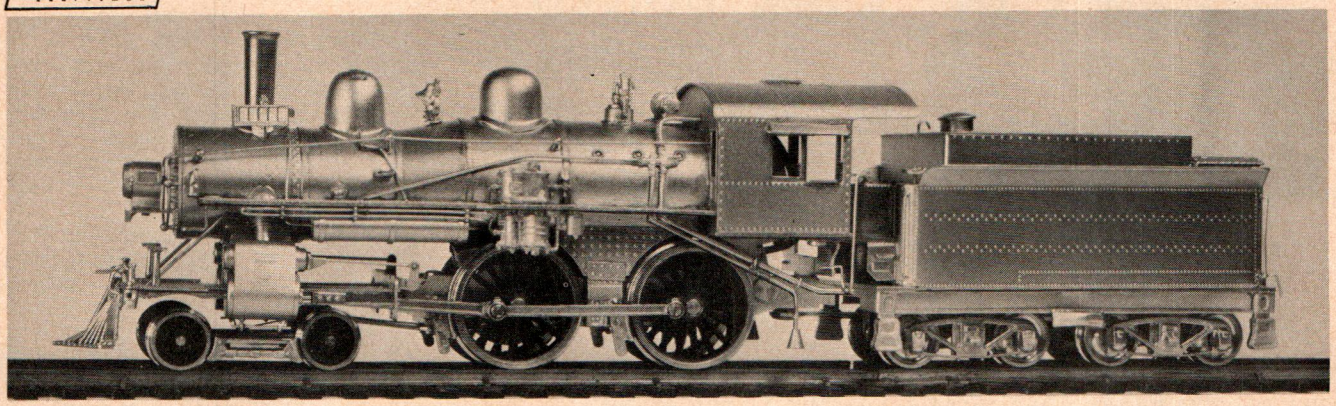


SOUTHERN PACIFIC CLASS P-10 **HO** **BALBOA**

Southern Pacific series 2478-2491, road class P-10, built by Baldwin 1923-1924. All brass model with cast, etched, stamped, and formed parts. Sprung 73" drivers, KTM motor, metal worm and gear. Tender has wireless drawbar, universal coupler pocket. Dummy front coupler and striker casting removable for application of auto-coupler. Model measures 12½" overall. Weight 29 oz. Ready to run, unpainted. Mfd. in Japan for Balboa Scale Models, Box 2656, San Diego, Calif., 92112. List price May 1966, $54.95.

LOCO BUILDERS PHOTO - 269

4-4-0

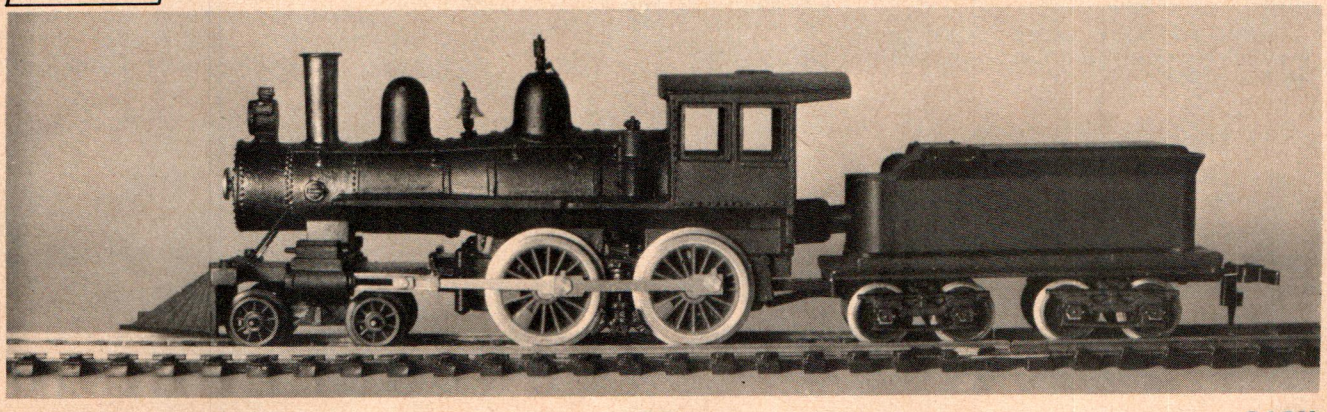


SOUTHERN PACIFIC (T&NO) CLASS E-23 **HO** **FUJIYAMA-PFM**

Model of 1899-1900 vintage 4-4-0 used on Texas, Louisiana, and coast lines of Southern Pacific. All built-up brass model with Cal-Scale brass investment castings. Enclosed gearbox, sprung 73" drivers, DC-195 motor. Wireless drawbar, universal coupler pocket on tender. Min. radius 15". Overall length 8½". Weight 17 oz. Mfd. in Japan by Fujiyama Kogyo Co., for Pacific Fast Mail, P. O. Box 57, Edmonds, Wash. 98020. Price, May 1966, RTR unpainted, $34.95. Consult current catalog re: parts availability.

LOCO BUILDERS PHOTO - 270

4-4-0



BALDWIN 1900 ERA **HO** **CARY**

Cary white metal boiler castings with domes, stack, and cab attached, investment castings, plus Tyco General mechanism with Tyco motor with worm and gear drive, and Tyco coal tender. Horn coupler on tender. 61½ inch drivers. Takes 18" radius or less. Spoked pony wheels. Simple assembly kit. Mfd. in U.S.A. by Cary Locomotive Works, Cary, Illinois 60013. Kit price May 1, 1966, $27.50. Boiler front available separately for converting Tyco General, drilled, $9.50; undrilled $8.50. Lost wax parts detail kit $5.25.

TRACTION PLANBOOK
AND PHOTO ALBUM

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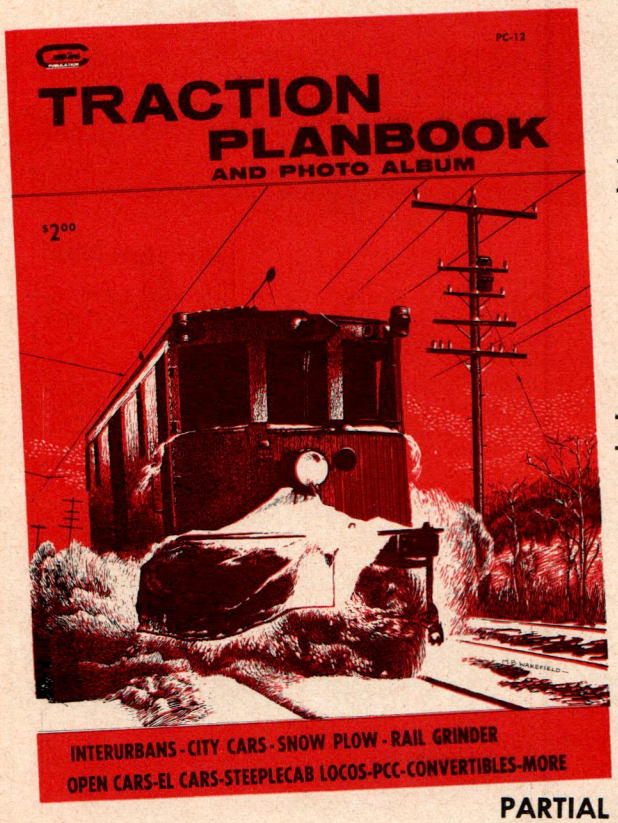

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TRACTION PLANBOOK (PC-12), 8x11, 68 pages. Published by Model Craftsman Publishing Corp., 1964.

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ting of the outer wall planks, calculate your cuts carefully to avoid wasting material. Milled parts for the retaining walls and ridge sections are of good quality and require only a minimum of sanding on the ends to provide a better joint for gluing.

A work area at least 18 inches long is essential for construction and must be absolutely flat. The finished model is 15½ inches long or about 110 scale HO feet, inside clearances are adequate for the largest engines. Two kits could be combined if desired though the average layout wouldn't have the room. On our model the retaining walls and footings are painted concrete color, with the wood parts getting a brown wash finish. The single track kit lists at $3.95 and the double track kit at $4.95. Lee Nicholson.

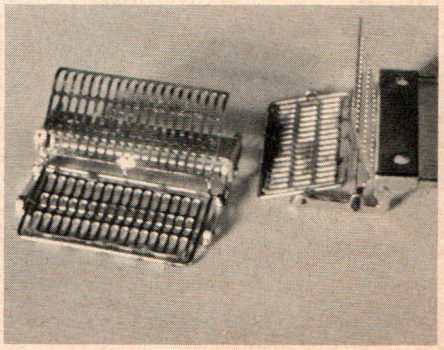
Eclipse Fenders, Operating: HO
Imported by E. Suydam & Co. Box 55, Duarte, Calif. 91010

Ed Suydam's outfit is importing operating Eclipse fenders, handcrafted and assembled in Japan, for use on HO city cars. Fenders of this type were in wide use on city cars everywhere during the early days of the century to prevent man and beast from being swept under the dangerous electric vehicles. As time progressed, they were generally superceded by simpler forms of fenders on most lines but were found in California until quite late.

The fenders may require modifying for certain specific prototypes. The units assemble easily with two small screws, but may also be attached with cement if preferred. Solder may also be used. In some cases a wooden block or shim may have to be used to raise or lower the fender to the correct height off the rails.

On round end cars, some gentle bending may also be necessary of the top fender portion. Tab ends may also require removal or bending in some cases to permit adequate coupler clearance. A small hook of spring wire may be attached to hold the rear fender in a folded position.

At $3.50 a pair, these little fenders are amazing and will greatly enhance many types of city cars. Catalog No. S-175.



Suydam's Eclipse trolley fenders are all brass for HO use. Units screw into position, can be soldered. Units operate and can be put in up or down position.

Alco Products Company's Model DL-640, forerunner of the Century 424 was produced in limited numbers. The Green Bay & Western got one unit, No. 310. Plans for the loco were presented in June RMC.

Two Span Truss Bridge Kit: HO

Mfd. by Mil-Scale Products, Box 4144 Western Station, Milwaukee, Wis.

Mil Scale's HO old time truss bridge is assembled from an all wood kit to create an attractive structure that goes together remarkably fast. Assembly time is short since all components are precut to exact size. The main truss is assembled from beveled beams and notched diagonals. After the main truss assembles are dry, pedestal beams and lateral beams are glued on to tie the truss together.

Ties for the bridge are included with the kit. We omitted these on our model since we plan to use prefabricated track. The prefab track will be satisfactory provided the ties have sufficient depth.

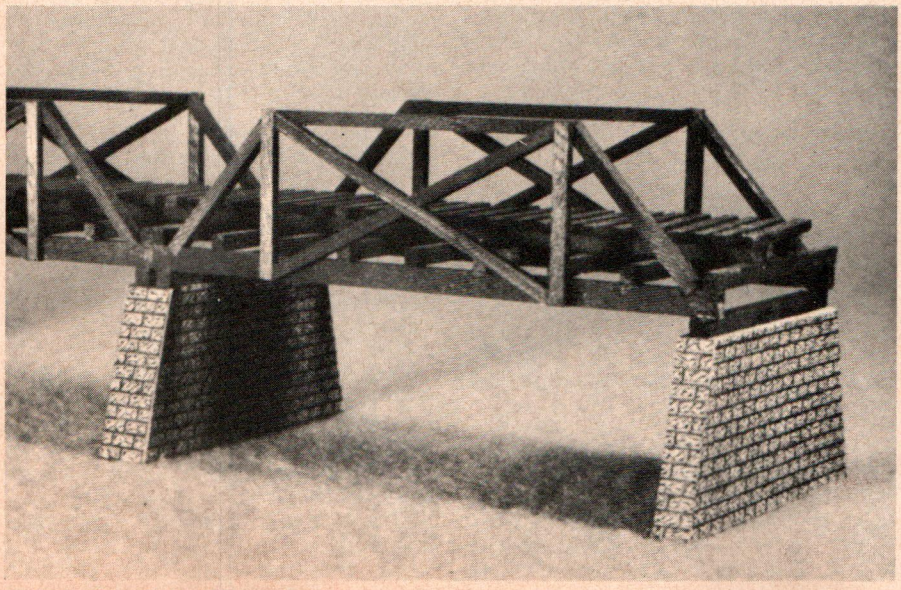
The stone piers are built by cementing stone building paper to precut forms.

There are several variations possible with this kit, such as combining it with additional truss spans. It can also be combined with other types of bridges. Our two span version was finished with a dark brown creosoted color, easily duplicated with Floquil or 410M paint.

Additional detail is readily added to this little structure and would further enhance the model. Dummy bolt and washer heads, and walkways would be suitable. There is also space for an outrigger type platform to hold a water barrel for fire protection.

Summing up, a fine wood kit for the beginner, or any modeler, that assembles easily, which can be adapted to fit any railroad. Price of two span kit, $2.75. Also in one, three and four spans. Lee Nicholson.

Mil-Scale Two Span Truss Bridge assembles easily from all wood parts and stone building paper, with all wood parts precut to shape. Kit comes in one, two, three, or four span versions.



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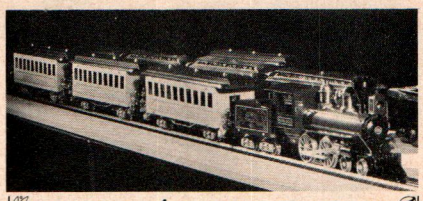

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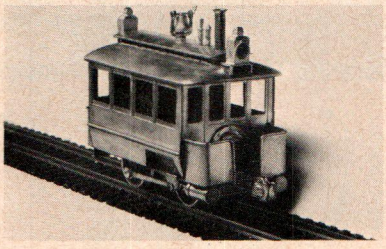

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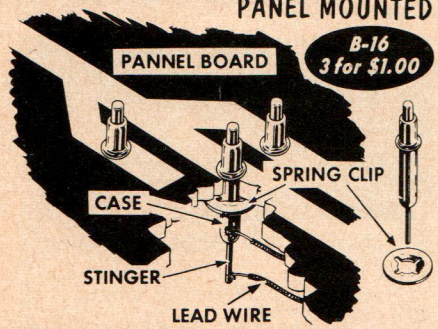

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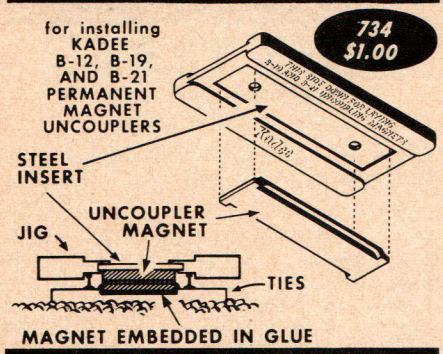

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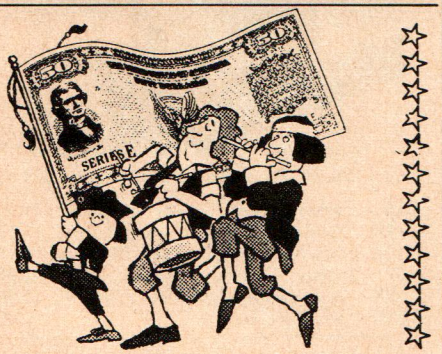

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TROUBLE SHOOTING

Conducted by Bill Schopp & RMC Staff

Questions for Trouble Shooting are welcome on any model railroad subject. Questions should be brief and to the point. We cannot undertake individual layout design work, nor can we recommend brands of merchandise. We will print those questions deemed of greatest interest to our readers. We will attempt to answer questions by mail when return post cards are included but cannot guarantee to answer all questions: Trouble Shooting, c/o RAILROAD MODEL CRAFTSMAN, 6 East Main St., Ramsey, N. J.

Insulated Joiners & Feeders

A.C.Jr.: How do you know where to put insulated rail joiners and terminal sections on an HO railroad?

ANSWER: If you are using Snap-Switches or Casadio or Custom-Line switches, as so many people do, you will find that NO insulated rail joiners are needed within any block. You need them only between blocks (as double tracks) that you want or need (as reverse loops) to control separately. With those switches, your track feeders may be located anywhere within the blocks. The type of track you use makes no difference: it is the type of switch. All of the cited switches have all branches live at all times.

Other switches such as Atlas Regular and Ready-Track switches do require some care in location of insulated joiners and feeders, but the topic is too involved to be treated in a few paragraphs.

2-10-2 Tender Problem

D.K.Jr.: I have a 2-10-2 and a 4-6-2. I carefully disassembled each of them for painting and am certain I got them back together again since they both will run. However: 2-10-2 & tender, coupled, sit on track—do not run; 2-10-2 with Pacific tender, coupled—still doesn't run. 2-10-2 alone on track, with power applied to drawbar and one rail: it runs! 4-6-2 on track with EITHER tender—runs well. Circuit breaker on power pack does not pop when 2-10-2 does not run.

Now what?

ANSWER: If the 2-10-2 runs alone, but not with either tender, yet the 4-6-2 runs with either tender as well as alone, I'd suggest looking to the wireless drawbar of the 2-10-2. It may have paint on it, interfering with contact. Or the spring wire which crosses the hole in the drawbar may be loose and not making contact with the pin on the tender. You may also have the drivers reversed on the 2-10-2.

Wood Parts In Freight Kits

S.T.: In building a freight car recently from a wood kit, I found that the sides weren't cut to the proper length and had a job trimming the ends to match the sides. Was it me or the kit?

ANSWER: Variations in size caused by wood shrinkage and other factors usually cause manufacturers to cut sides and/or ends somewhat oversize, leaving the precise trimming to the modeler for an exact fit. On prepainted sides, this means some touching up with matching paint, often included in the manufacturer's instructions. After you build a kit or two, minor problems like these become second nature.

Pulse Power

D.W.: I just bought a new power pack which seems very good, but it has no pulse power which is necessary for smooth starts. How do I put in pulse power?

ANSWER: It's not really necessary, but it helps. It shouldn't be used at speed, though.

If you dare open the power pack "can" you should find a rectifier consisting of five plates. The second and fourth of these are connected to A.C., the transformer. The first and fifth, combined with the third, deliver D.C. A wire of bar connects the first and fifth. Cut this and you get pulse power. Reconnect it and you get full wave power. To keep from having to cut and reconnect it, wire in a simple SPST switch such as a toggle. If you do not feel competent to do this work, don't: ask a professional to. Opening the can of a power pack will void any guarantee it may have. Naturally it should be unplugged at the time.

Knuckle Automatics in Tinplate

W.G.: In 1962 I purchased fully automatic couplers from Kusan. Inc. for O gauge, but this firm has since gone out of business. Can these couplers be purchased from any other manufacturer? I have not seen any advertised.

ANSWER: The Kusan couplers are no longer made though some dealers might still have a few around. Couplers that will mate with the Kusan couplers are offered by Lionel or Kusan are also offered by All-Nation Line.

If you're a scale man, we'd suggest a complete conversion to one of the scale working knuckles. Monarch

The Greatest Show On Earth was using large open flat cars and rubber tired wagons by the late 1940s. Following a disastrous tent fire, the show became streamlined, playing only in large arenas.

couplers are beautiful although not automatic. Central Locomotive Works has an automatic coupler that also works with AAR scale types and for which a suitable ramp will someday be offered, we believe.

Model Railroad Movie Film Size

G.E.: What size movie camera would you recommend for taking home movies of my layout in action?

ANSWER: If you do not now own any movie camera or projector, we would recommend that you look at the new Super-8mm equipment now being introduced and which can be expected to eventually replace regular 8mm for popularity. The film width is the same for both systems but the Super 8mm films have smaller sprocket holes permitting a film area nearly 50% larger than in conventional 8mm movies, resulting theoretically in sharper projected images, since the film image is larger. Many Super 8mm cameras boast the latest in automatic features unheard of a few years ago.

Modelers with unlimited funds should look into 16mm equipment since it does offer the ultimate in sharpness because of the larger film size.

Conventional 8mm equipment continues to be produced and much of it can now be purchased at very low prices, because of the change to the new larger system. Many 8mm fans with large libraries of the earlier system, including much irreplacable footage of steam locos and trolley lines, will be hesitant about making the switch but will in time probably be forced into the change, retaining a regular 8mm projector for their older footage and new Super 8 equipment for their current shooting. RMC's Hal Carstens has made the change. He likes it.

Gas Powered Gas Electric

R.McC.: Is there any reason a gas-electric couldn't be built using a real model gasoline engine, such as the model fly boys use?

ANSWER: It probably could be done in O scale, since the average gas engine isn't much larger than an O gauge motor. Some problems that would need resolving include noise, gearing down, some easy method of starting, a control system, and exhaust control. It would be interesting, though probably not too practical.

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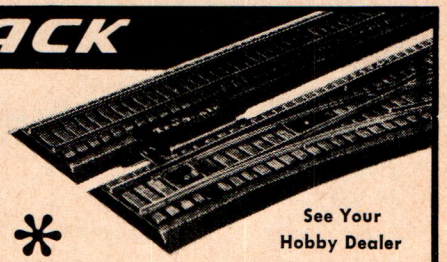

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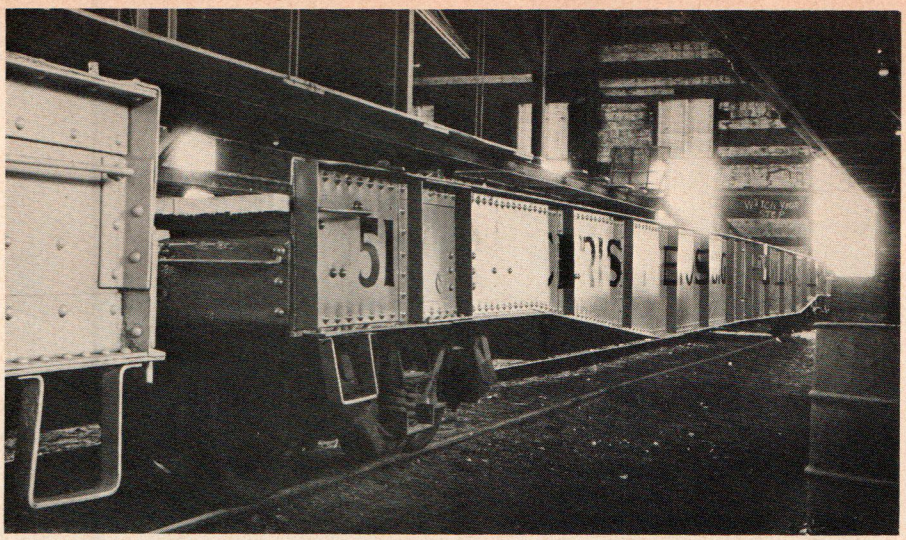

Mt. Vernon type car is exemplified in this reproduction of CWM Car No. 51 in deep orange and black letters, lettered for the once great Christy Bros. 5 Ring Wild Animal Circus. Car is ex-WOM 81.

Left-Hand Running?

R.T.: Does the Layout Doctor have a liking for left-hand operation? On many of his layouts it takes an extra lap around, running on the wrong track (if double) to get into the yard. Most American railroads favor right-hand operation.

ANSWER: On many double track layouts it works out better to have the crossovers between the tracks at reachable locations, even if it does mean an extra lap around, on the wrong track. This also eliminates too numerous crossovers and keeps a pike simple. The wrong track running is not going to cost any lives and not even any damaged equipment.

Cleaning Out Oil

C.N.: I've written to several manufacturers about this but have had no response, so am turning to you: how do you clean out old oil and caked grease from a locomotive in order to use one of the new lubricants such as LaBelle #101 mentioned in Feb. 1965 RMC? Must I take the engine apart?

ANSWER: Manufacturers usually do not have the facilities to explain technical questions to correspondents: first ask your hobby dealer, and if he cannot help, ask RMC.

Oil can be removed by use of benzene or carbon-tetrachloride. The former is quite flammable, the latter dangerous to breath—though I didn't know that when, as a kid, I used it to find watermarks in stamps—at least in a poorly ventilated place. There are also several commercial preparations on the market, with more in prospect.

It is not usual to have to disassemble an engine except to remove the superstructure. This lets you get at the motor and bearings, the top worm bearings, if any, and even the tops of some driver axle bearings. The latter can be reached a little better if you remove the retainer plate. Lave the cleaner on with a small paint brush of type used or models. A stiff brush may be needed to clean gunk out of the gearbox itself (which may possibly have to be removed)—something like an electric shaver brush. Sometimes a second washing is needed to remove the first which has merely spread the old oil around.

The LaBelle No. 101 lubricant is now available from a number of retail suppliers. Check ads in Railroad Model Craftsman. Available from LaBelle only in quantity. This is not LaBelle Woodworking, incidently.

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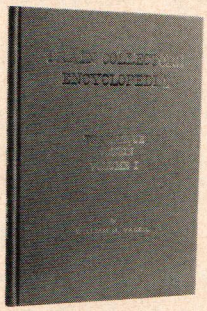

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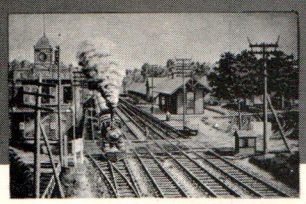

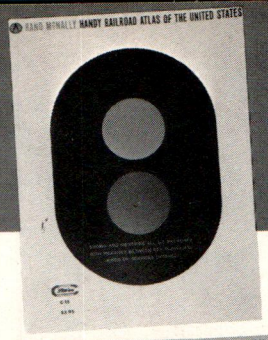

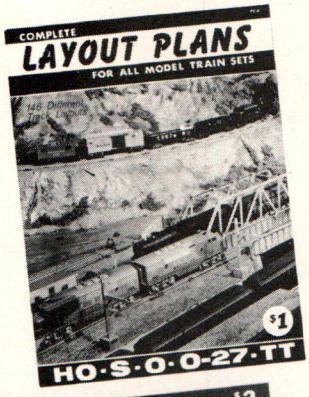

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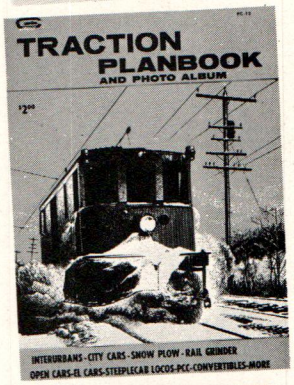

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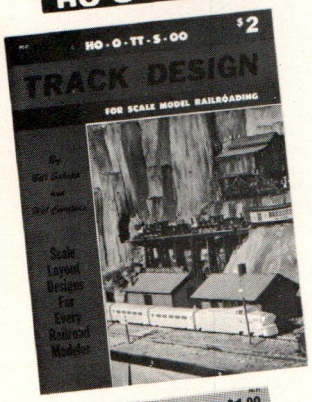

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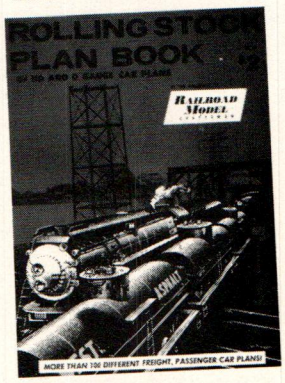

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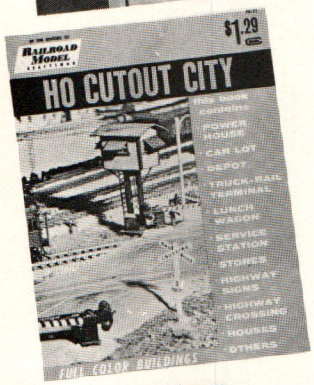

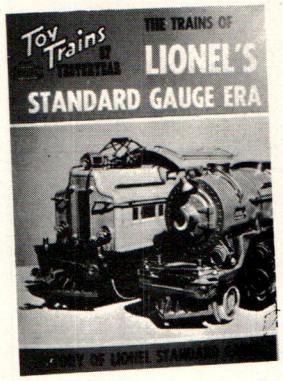

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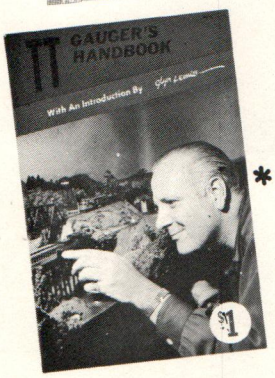

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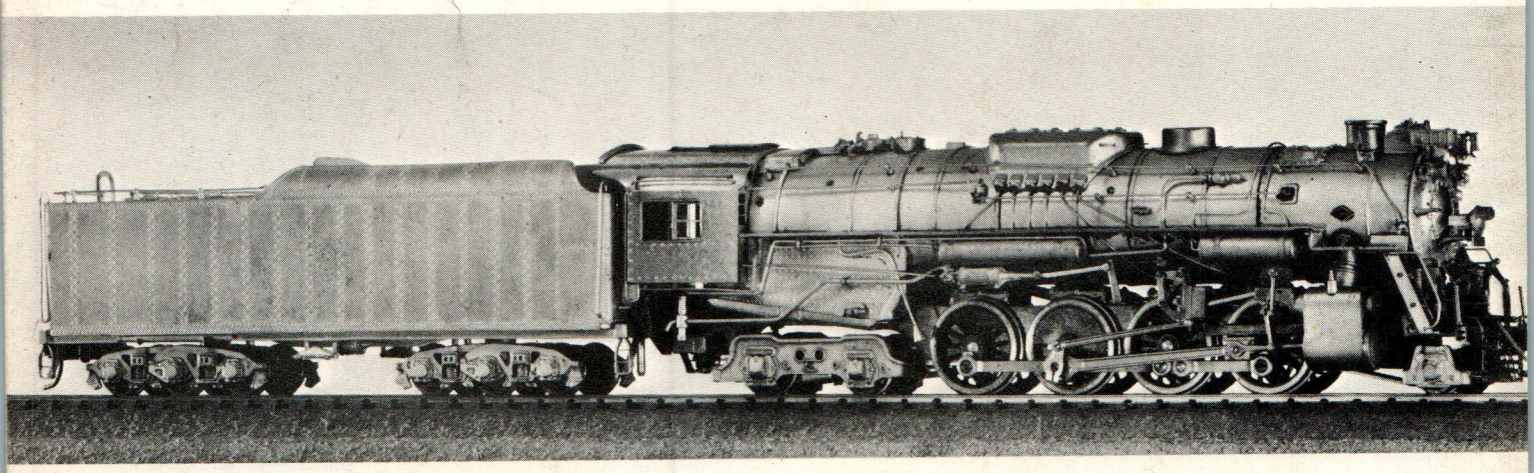

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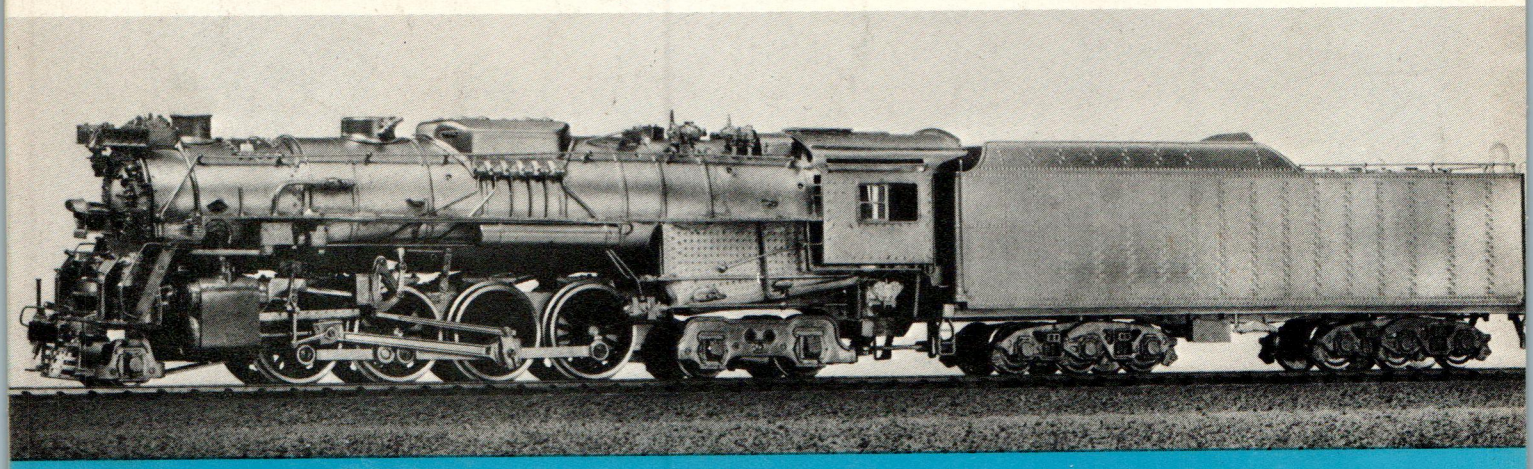

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